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THE PRACTICAL VALUE OF HUMANISTIC STUDIES*

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Two characteristics mark the attitude of our day toward educational matters, the first a widely diffused interest in such things in general, the second a great scepticism with regard to the value of this and that in detail. The springing up of new universities, the multiplying of teachers' associations, the establishment of new journals for teachers, are among the evidences of the first of these characteristics. Of the second, no evidence is needed. The air is full of slurs upon one and another phase of collegiate or high-school study. They come from every quarter. If you will watch the daily papers at commencement time, you will see that few of our commencement orators, if imported from the outside, fail to point out, somewhere in the tide of their eloquence, that the ardent young graduate is about to plunge into a cold world in which book-learning does not count. If the orator neglects this fertile theme, the editorial writer of the local paper is likely to repair the omission the next morning, and to insist that young men ought nowadays to be so trained that, when they get out of school or out of college, they can make a living. And if these gentlemen single out any particular kind of studies as exhibiting the perfection of inapplicability and uselessness, it is likely to be

* This paper was prepared, many years ago, for the writer's students at Cornell University. It has been read, since then, before a number of associations, the last of which was the Michigan Schoolmasters' Club, at the request of whose officers it is now published.

the most distinctive of the humanistic studies—the once enthroned Greek and Latin.

One finds it, of course, natural that, in this general questioning, the things which have been pre-eminent in the past should be subjected to the fiercest examination, and not surprising that, under the well-known behavior of human thought, the presumption should seem to be against them, rather than for them. That which has been, has had its day—such is the easy conclusion of the unregenerate human mind. That which, in the cases that arrest our attention, does not work, is bad—such is the equally easy conclusion of the human mind at a stage of partial illumination. No kind of proof is more dangerous. The question has always to be asked, Is the evidence fairly complete? Everyone knows of Bachelors of Arts who have not the art of making a living. But everyone knows of Bachelors of Arts who make a very good living indeed, and, on the other hand, everyone occasionally witnesses lamentable failures on the part of men who were fortunate enough to start in life unencumbered with Greek and Latin. The method of proof by the count of heads is an interesting one, and would be fruitful enough, if it could be carried far enough. If it could be shown, for example, that there is a clearly larger percentage of failure among men who have had the collegiate education than among those who have not, or among those who have had Greek and Latin than among those who have not, then something certainly ought to be done in the way of reform. So far as my own experience goes, the fact would seem to be the opposite. But such views are necessarily personal. Every man judges by the heads he happens to notice, with results to his own satisfaction. We must try a safer way, not a new one—there is none—but a good one. It consists merely in the patient examination of familiar ground, and, above all, of our points of view.

Let us, then, putting aside personal standards of opinion, and possible local standards of prejudice, start from the fundamental question, What is education, and how is it related to the college curriculum?

First, let us recognize distinctly that a college education does not work miracles. It is a good, but imperfect, means of developing an imperfect creature. At the end of it, a young man does not spring forth full-armed and capable, like Athena from the brain of Zeus; but he has won, or may have won, certain things. These things fall into five classes: first, the power of seeing that which is, and inferring from it that which must be; second, the power of expressing himself with correctness and force; third, a body of interesting and useful information; fourth, mental horizons—the intellectual background of the man's life; fifth, something still more precious, which I beg to be allowed to leave for the moment unstated. The first, the power of clear seeing and clear thinking, is the result of what is known as "discipline," and may be excellently obtained from humanistic studies. You see, and must wonder at, my courage. For a long time, no advocate of classical education has been safe from ridicule when he has urged the disciplinary value of the study of Greek and Latin. That claim is so old as to sound absurd. Curiously enough, exactly the same claim is made for their subjects by our friends and colleagues of the natural sciences, and, coming from this new quarter, is listened to with the respectful attention which it deserves. By and by, that too will be an old story, and then we shall have a fairer attitude toward the whole matter, and a recognition that whatsoever study, in itself not too easy, presents phenomena to be observed, and inferences to be drawn, affords so good a field for discipline, of one kind or another, that the question of the choice should turn rather on other considerations. Leaving this topic for the moment, then (I shall return to some aspects of it a little later), let us consider the remaining four—the acquisition of the power of expression, the acquisition of a body of information, the acquisition of an intellectual background, and the fifth, from which the curtain has not yet been drawn.

With regard to the acquisition of the power of expression, I fancy few words are necessary, so far as the ma-

jority of humanistic studies, those that deal with literature, are concerned. It is obvious that they are in their very nature fitted to develop this power, since a considerable part of the work in them is devoted to a study of the form of expression of the original, and a re-expression of the same ideas in the mother-tongue. The *importance*, likewise, of the acquiring of this power is universally conceded. It would be sufficient to refer to the position taken by the Leland Stanford Junior University, in the matter of a requirement in English. That university holds that one study is as good and as dignified as another, and that, in consequence, no study should be required, the choice of his course being left wholly to the student. With illuminating inconsistency, however, the University requires English of every student, both before and after entrance; and, since the aim of the Leland Stanford University is avowedly practical, we are bound to suppose that back of this requirement lies the conviction that the power of expression in the mother-tongue is of prime practical importance.

We come next to the matter of the body of interesting and useful information acquired in school or college. Before we take this up, however, we must draw a sharp line of demarcation, and be willing, in looking at prevailing systems, to spend a few minutes in seeing them in their historical place and connection.

There are two distinct kinds of education, corresponding to two distinct aims. There is, on the one hand, the education that aims to prepare the young man or young woman to do, with intelligent skill, certain things, more or less manual, through which a livelihood may be obtained—the so-called industrial education. The race among the nations of the civilized world turns, to a very important degree, upon the opportunities afforded to their young men of "practical" tastes, as the misleading phrase is, to learn, under skilled instruction, the things which in our country are mostly learned in the haphazard school of raw labor. Closely allied to this, but requiring a higher stage of intellectual development, and offering oppor-

tunities of brilliant careers to the most gifted, is the technical education, the outcome of our splendid material civilization, and the pledge of splendors yet to come. To this, also, I concede every claim but one. It is impossible to overrate the importance either of the industrial or of the technical training, so long as your method of urging that importance is not by asserting the uselessness of other things, belonging to a wholly different aim and wholly different kind of life.

At the opposite extreme from the industrial and technical lies the so-called liberal education. It arose, or rather arose a second time, in the Rebirth of Europe, which began some six centuries ago. At the root of it lay a growing sentiment, to which the name of Humanism came later to be given. The sentiment, the idea, are substantially the same today as then, and we shall clear our conceptions of education by seeing what the essential nature of this movement was.

The slender thread of intellectual life had been carried on from Roman times by the churchmen and expounders of the law; and, through the former in particular, the Latin classics had been preserved, while the ability to write a certain kind of Latin had all along been a necessity to both classes. Knowledge of the Greek tongue, however, had wholly disappeared from western Europe. I shall not attempt to trace the causes of the movement which led to the beginnings proper of the illumination. There was, of course, no sudden appearance in the world of something wholly lacking before. Nature does not work by leaps. But there was one man in whom the new spirit was so pre-eminently strong that he is beyond question the father of modern thought—the poet Petrarch.

Brought up to be a lawyer, Petrarch was trained in the Latin of his time, and his enforced taking of holy orders in his desire to lead a literary life doubtless was a still greater help to him in his study of Latin writers. This study was, of course, not due to the influence of any "college fetish," to use a phrase made famous by Mr. Charles Francis Adams: it was the result of a serious passion. In his authors,

and especially in Cicero and Virgil, Petrarch found that which was food to his soul. A journey to Rome wrought upon him that indescribable spell which it has produced since upon a Goethe and a Winckelmann, and which it produces upon every traveler of today that carries a soul with him. A visionary and enthusiast, a lover of the wild and romantic in nature, Petrarch established himself some time later in the solitude of Vaucluse, where he led for four years a life of study, devoting himself to Roman literature and history, and preparing for his Latin epic poem *Africa*. The fame of his writings brought him the laurel crown at Rome, which he received upon the Capitol, with solemn ceremonies, in the year 1341. The oration which he delivered is notable in the history of the human spirit. His text was the words of Virgil, from the third Georgic, verses 291-92:

Sed me Parnassi deserta per ardua dulcis
Raptat amor:
"But, as for me, the sweet love of Parnassus
bids me hasten on through steep and desert
ways."

The ceremony was not new. Others before Petrarch had been similarly crowned, in other cities of Italy. But Rome, though she was now the seat of neither emperor nor pope, was still, in the imagination of men as in their memories, the mistress of the world. It was fitting that, upon the spot most solemnly associated with her ancient grandeur, the man who was to evoke again the life of art and science should deliver his defense of letters, and summon men once more to the heights of Parnassus, so long deserted. Upon the Capitol at Rome, antiquity that day passed on its wealth to the emerging spirit of the modern world.

In the next year, Petrarch attempted the study of Greek, having for his teacher a Calabrian, long resident in Greece, the first of those Greek scholars who played so important a part in the new life. Petrarch began, as he himself tells us, with great alacrity, but the difficulty of an entirely strange tongue, and the early departure of his teacher, cut short his purpose. Yet he divined the value of Greek, and it was

partly through his encouragement that a younger friend and intimate, Boccaccio, prosecuted the study, and helped to make it possible for others to prosecute it. It is worth noting, as we pass, that our modern classical studies begin with the two first great names in *modern* literature. Classical education is not, as is so often said, descended from Mediaevalism. It is descended from the *revolt* against Mediaevalism.

The study of Greek did not get on very fast at the outset, and Petrarch says in one of his letters to dead authors, as we should call them, now that Andrew Lang has reinvented them—a letter addressed to Homer—that there were at that time not above ten persons in Italy who knew how to value the old father of the poets; five at the most in Florence, one in Bologna, two in Verona, one in Mantua, one in Perugia, but none at Rome. This seems a slow beginning; but in the fifteenth century, when the movement was fairly started, the Revival went on with marvelous rapidity. There was an ardent study of Greek and Latin, a hunting-up of manuscripts and a copying and disseminating of them, a writing of expositions, of grammars, of histories, of compilations of antiquities. Popes, princes, bankers aided the new activity. The lecture-rooms of the Italian universities were crowded with eager hearers. The spirit of a new crusade, a crusade of the intellect, had come upon the world. Then followed, with the invention of printing, the rapid multiplying of classical texts. The new activity spread to France, Germany, and England. The professors of rhetoric, as they were called, expounded, in crowded lecture-rooms, Greek and Roman grammar and philology, religion and customs, numismatics, philosophy, mythology, law, and institutions—the classical curriculum of today—with means of investigation imperfect as compared with ours, but with a zeal as great as would that ours were! This was some hundreds of years ago. We are doing the same now. Why should we occupy ourselves, in this busy new world, with the things that occupied men when the continent in which we live was unknown?

Another question must be asked and answered first. What

was the spirit that animated the Revival? For if that spirit is still the true one, then, no matter how old it may be, we should only be going astray from human nature by departing from it. It was the spirit which recognized the dignity and power of *man*—a conception vastly different from that which had obtained in the Middle Ages. Hence its name of *Humanism*. Unconscious at first what its mission of disintegration and reconstruction was to be, it exercised human judgment upon life. It looked with fresh interest upon this world. It read a great and hopeful lesson in that which humanity had accomplished in Greece and Rome before the coming of Christianity. It longed to become again creative, as antiquity had been creative in the still visible remains of art and literature.

The movement was not, mark you, an attempt to save the old, but the bursting forth of new life which found its food and inspiration in a great past. It threw off the burden of what was false in the religious and political conceptions of the Middle Ages. It was a revolt against asceticism, or the belief that God intends His children to be happy only in the hereafter. It was a revolt against mysticism, and in favor of rational inquiry. It went too far, like many another good impulse in the development of man, and in parts of Europe, especially in Italy itself, came near to return to the paganism on which it fed. But it was essentially sound; and out of it was born the Reformation, as truly a fruit of the Classical Revival as was the classical curriculum itself. Out of it, too, was born modern science. For the first break with mediaeval science came through the works of medicine, medical botany, and anatomy, translated and edited from Hippocrates, Galen, and Dioscorides by Italian, French, German, and English physicians.

To put the matter briefly, then, the humanistic spirit, first showing itself clearly in Petrarch, asserted the dignity of man, the interest of this world, and the right of free inquiry. And with these assertions went a passionate love of the highest products of the human spirit, namely, literature and art.

Then we are ready to say why we are occupying ourselves with the same things as these professors whose voices have been still these hundreds of years. It is because their animating purpose corresponds to an eternal fact. Man, and the records of his spirit, then constituted, and must forever constitute, the object of supremest interest to man. I do not mean that there are no other objects of interest. We are invested, as a race, with a boundless desire to understand the world in which we find ourselves. The habits of the ant, of the flower, of the bee, of chemical reagents, of moving forces, find men in abundance to study them with the zeal of investigators, and students in abundance to learn from these investigators. But the claim that any of these things, the ant, the bee, the chemical reagent, is a more worthy object of interest, or an actually more interesting object, than the human mind, is a preposterous one. I haven't a word of complaint for the man who, for himself, finds the ant-hill or the bee-hive a more attractive product of life than *Hamlet* or *Faust* or the *Idyls* of Theocritus. But if such a man says, or if his students say, that for the great mass of young people these things are intrinsically more interesting, then I have only to answer that, in the nature of things, that which is of the greatest and most permanent concern to the average man must be the character, behavior, and accomplishments of the most highly developed and richly equipped of this world's products, namely, mankind—the object of humanistic studies. Pope allowed himself a poet's overstatement when he wrote "the proper study of mankind is man." But what he meant was substantially true. All those studies, then, that enable us to understand the mind and heart of man will be of interest to men in a non-technical education. Among such subjects is obviously history; and, happily for us, while the materializing tendency of our wonderful outward civilization has attacked everything else that deals with the past, it has, nevertheless, with salutary inconsistency, not felt that we could completely understand the America of today by beginning with the Philippine War, or with the Civil War, or with the War of 1812,

or with the Declaration of Independence, or even with the Landing of Columbus. Not a whit wiser is it to suppose that the study of *any* phase of human activity can begin with that which today is. The present can be seen justly only in the setting of the record of the race; and there is no record more authentic—no record so intimate and so vital—as literature. The study of this constitutes the gentler discipline, in which the tastes of many are likely to meet. Secondary to it, but only secondary, is the study of the workings of the human mind as seen in logic, and in the expression of thought in words, or, in the terms of the schools, in rhetoric and grammar; and hardly secondary, even, is the record of the appreciations and visions of the human mind, as seen in art.

I have for the moment dealt with the question of the value of humanistic studies by referring to the intrinsic interest of such studies. I come now to another point of view, and, at the same time, to a perversion of judgment from which we, in this country and this age, are especially liable to suffer. It is said, and said too often without prompt contradiction, that the study of mathematics and of the natural sciences is practical, is useful, while the study of literatures, of systems of speech, of art, is ornamental, having nothing to do with getting on in the world. Let us look more narrowly at this assertion. An admirable, and, to my mind, an indispensable training is given through the mathematics of the school or the college. But, unless we are to be engineers or surveyors, what are we to do later with our higher algebra, our solid geometry, our trigonometry, our conic sections? The simple fact is that the mathematics of daily life consists of addition, subtraction, multiplication, and division, with perhaps a little cancellation—in short, the mathematics, not of the college, nor yet of the high school, but of the grammar school. So, too, we get interesting and valuable knowledge, knowledge of which every student should have some share, in the study of physics and chemistry. But unless we are going to be mechanicians or manufacturing chemists, upon what is our knowledge of physics or chemistry going to be brought to bear in

daily life? I know, as well as the physicist, that the falling mass will crush me, and I get out of the way, though I no longer remember how to calculate its striking power. My fire warms me as it warms my friend, the chemist, though I have forgotten, thirty years ago, precisely how the invisible gases behave in combustion; and that fire would warm me, even if I had never known. I can use the telephone as well as another, though I couldn't possibly make one or even repair one. I travel by cars as well as any professor of mechanical engineering, though such a professor could probably run the engine, while I should need a little preliminary training. And when I say "I," I might as well say "you," or people in general who do not devote themselves to the technical work of life. The average untechnical man in the world, whatever he is finally to do, is distinctly the gainer by the study of mathematics and the study of chemistry and physics, and he *may* find in those subjects that which will prove to be the very food of his natural individual appetite. But the claim that he will find mathematics, physics, and chemistry of *practical* use to him in daily life, is baseless. For the average untechnical man, the practical things are far more subtle than these. Putting aside, as necessary to acquire, no matter what one studies, the mechanics of the mind, namely, the power of accurate observation and accurate reasoning from that which is observed, the things which will help a man to get on in the world, outside of the manufactory and the patent office, are: a knowledge of and ready sympathy with men; quickness and flexibility of mind; and the power of expressing himself accurately and forcibly. A student of the course of electrical engineering in Cornell University, a man of excellent ability, said to me at his graduation, that, while he had got from his scientific studies the means of making an immediate living, yet many of the men in the courses in arts and philosophy, who had entered at the same time with himself, had outstripped him in ways that he could apprehend—had grown away from him—and that, to just this extent, he felt handicapped in the race of life. That was a dim recognition of the practical value of the so-called unpractical studies, even in the case of a man

who will mostly have to vie with men no more liberally educated than himself.

In all that I have thus far said, I have used the word "science" as covering the natural sciences, in distinction from the humanities. This is the commonly accepted meaning of the word in this country. It is often pointed out that the usage is an unfortunate one. I wish to point this out again today, and then to call attention to certain things that follow from a juster conception.

Webster defines science as "knowledge duly arranged, and referred to general truths and principles on which it is founded, and from which it is derived." I should like myself to define it, more simply, as *ordered knowledge*. Briefly, we may say that science deals with facts, and the reasons for those facts; or, more briefly still, with facts and principles. No narrower definition would anywhere be accepted, or, indeed, is anywhere accepted. But it is obvious that this is too broad a definition to be limited to the range of the natural sciences. Wherever there are facts, there may be a recording of those facts, and an attempt to understand their relations. Political economy, then, though it deals with the behavior of man within a certain field, and not with nature outside of man, is a science. Sociology, which likewise deals with the behavior of man within a certain field, aims to construct a science. History, which deals with the facts of man's experience within limits hard to fix, is a science. Comparative philology, which deals with the forms or the syntax of several languages, and attempts to detect the operation of principles through which they have come to be what they are, is a science. The study of the history of a literature, if it aims to trace the development of that literature, and the principles that have governed the development, is a scientific study. So is the study of Greek philosophy, or of Greek art. So is the study of Roman law, or of Roman administration. Furthermore, it is obvious that the aims and methods which I have indicated are the aims and methods which have long governed all humanistic study whatsoever, so far as the things studied

can possibly fall within the reach of scientific method. The *American Journal of Philology* is as much a scientific journal as is the journal that bears the name *Science*. Moreover, the spirit of man, with whose behavior the humanities deal, is in reality just as much a part of nature as is his body, or as are chemical reagents, or the forces which physics measures. Strictly and fairly, then, every study that deals with the recording and explaining of facts is a branch of natural science. Long-established usage, however, is hard to overthrow. The unhappy antithesis which the philosophers have, for over two thousand years, been setting up between man and what they called nature has so controlled nomenclature that we must accept the meaning now attaching to the latter word, and must be content, therefore, to divide the body of science into two parts: the humanistic sciences and the natural sciences.

Let us utilize the distinction by pointing out certain facts and drawing certain inferences.

First: In the ordinary conduct of human life, whether in our business or in our other relations with the world, we are governed by considerations which do not admit of an absolutely certain correctness of decision. We see reasons on both sides. Perhaps they appear to be evenly balanced. Perhaps they seem a little stronger, perhaps they seem a good deal stronger, on the one side than on the other. In every case, however, where any question at all arises, it is by probabilities that we are governed. Nor can we solve our problems by applying the actual test of experience before taking our step; for it is only the actual taking of a step, one way or the other, that provides us with experience.

Now the process by which the student of the humanistic sciences arrives at conclusions is of a precisely similar nature. In endeavoring to discover the reasons for facts which he has recorded, or which others before him have recorded, say in French syntax, or in Latin syntax, he has first to divine a line of proof. Often, after grasping clearly the nature of his problem, he is sorely baffled to see along what path to

look for evidence—to divine what phenomena would *afford* evidence. And, when he has seen this, and reached his evidence, it is generally not of a one-sided kind. He has to balance indication against indication, and thread his way through complicated considerations to an ultimate probability, great or slight. Nor is this true of the more advanced questions only, with which the graduate student may come to occupy himself. It is true, in substance, of all the work in the humanistic studies ordinarily done in the classroom of college or school. The schoolboy who is working out the meaning of a page of Greek or Latin for tomorrow's lesson, if he has been rightly trained, is working in the same way. In trying to see what his author means, he is going through a process of repeated balancing of considerations. A given word has, in most cases, a number of possible meanings. How can he tell which meaning his author had in mind in speaking or writing that word? A given case, a given mood, may have two or three or a dozen differing forces. Which force did his author mean in this particular case? In order to decide, the student must look for all the possible evidence on the page before him, and then balance the various possibilities in the light of this evidence. The process of learning to read Greek or Latin is, indeed, when properly taught, a process of acquiring the power of rapidly feeling possibilities, and of rapidly weighing them.

The processes of the study of the natural sciences, on the other hand, are, in a large degree, of a different kind. Some of the great inductions of science, to be sure, have been reached by procedure of a similar character. The theory of evolution, for instance, has never been proved by absolute evidence, nor, in all probability, does it admit of absolute proof or disproof. The atomic theory, the glacial theory, rest on the balancing of evidence, and belong accordingly to the same class with the larger generalizations of political economy, of history, of linguistics. But the ordinary work in natural science, as performed in our schools and colleges, proceeds in a large degree by definite and incontrovertible tests. The very merits claimed for it, as against the classical training, by such men as the late Presi-

dent Francis A. Walker, of the Massachusetts Institute of Technology, lie in the fact that its results do admit of definite tests. A hypothesis is laid down. An experiment is then performed, which, if rightly devised, will absolutely settle the question one way or the other, or, if it does not go so far, will at least completely eliminate one conceivable explanation; after which, other experiments will follow, until an absolute result is finally reached. This is admirable, and no complete education, in my opinion, can afford to dispense with it. But it is not the sort of thing that one has to do in practical life, and it therefore does not directly prepare one for that life. It is, in a word, a less *practical* training, for the average man, than the training given by political economy or Greek. If you must be guided by practical considerations in the choice of studies, then, unless you are going into technical work, the methods of humanistic science will serve you better in daily practical after-life than the methods of natural science. And, of all humanistic sciences that can have their place in the curriculum of the schools, the science that is brought to bear in the reading of Latin and Greek is the most effective, because, it demands, in a higher degree and with a greater constancy than any other, delicate and exact observation, and the rapid weighing of large ranges of possibilities.

I come now to the fifth possible acquisition to be gained from education. I remarked, a few minutes ago, that the aims and methods of all studies have long been scientific, *so far as the things studied could possibly fall within the reach of scientific method*. This reservation is of the gravest importance, and is fraught with far-reaching consequences, the moment one comes to weigh the question of educational values. For there is, in human life, a great field with which science has nothing to do, and can have nothing to do; and to this field a large part of certain humanistic studies belongs. The student who is reading the *Persians* of Aeschylus proceeds by a scientific method—largely unconsciously by this time, if he has been rightly trained—to find out what his author says. But the *effect* upon him of that which his author says is something of a wholly different kind

from any recognition of scientific fact. It is the incalculable effect produced by noble passion and perfect expression. It is precisely this incalculable element that constitutes the supreme virtue of the study of literature and art—not *because* it is incalculable, but because it belongs to the finest issues of human life. It has no counterpart in science. It is not a matter of the recognition of law. It is a matter of spiritual and aesthetic perception. It cannot be defined. You cannot put it under the microscope. People have tried so to seize and study it, but never with success. Arnold rightly says: "The mark and accent of beauty, worth, and power in poetry of a high quality cannot be defined." And the same is true of prose, the moment it goes beyond the stage of being a mere vehicle of communication. Literature, then, has something to offer, real but unmeasurable, which science has not—nay, which even history has not in the same degree; for Aristotle's observation, quoted by Arnold in the same paper, is profoundly just, that the superiority of poetry over history consists in its possessing a higher truth and a higher seriousness. Now it is not the man of letters alone that recognizes that literature has something to give which is not included in the realm of science. Among the few masters whom we all venerate is Darwin. Darwin's scientific sense and power are not to be impeached. They grew with him to his latest years; but poetry, which had once formed some part of his mental life, became, as he himself tells us, less and less intelligible to him. Many men might say the same thing with contempt. Darwin was too good a man of science to do this, for he recognized that the love of noble literature is an actually existing fact, and a means of great and high pleasure. Shall I say that the most serious difficulty in the way of sound and just judgments in the matter of educational values lies today in the fact that many men of the natural sciences, and not a few men of the humanistic sciences, fail to recognize that which the great master saw? The scientific sense, as such, has nothing to do with these matters, and possesses no perception for them, whether that scientific sense belong to a chemist, a biologist, a political economist, or a Latinist. This is the main reason

for the failure to recognize the value of literary studies, and the consequent tone of superiority to such studies, too frequently betrayed by the man of science. There are most able and excellent persons, business men, doctors, lawyers, professors, who are without the sense for literature, just as there are most able and excellent men who are without the sense for music. A second reason is our unhappy modern narrowing of the student's preliminary training, in consequence of which many a man who possessed the latent sense for literature failed to have it developed, or even to know of its existence, because his training, at least beyond the rudimentary stage, had been in science only. My own sympathy is deep on both sides. I know no reason why the satisfactions of the scientific sense should be left out of any man's life; I largely, in my own field, live in them. But I also know no reason why the satisfactions of the imagination and the love of perfect literary form should be left out of any man's life; I could not live happily without them. The tendency of our extremists in education is to narrow the intellectual life. Narrowness is better than dissipation, but there is something between these two vicious extremes. Education need not be a failure if, instead of aiming at unfolding one of the two capacities of the human intellect, it aims at unfolding both.

We have now recognized the distinctive character of certain humanistic studies, and are ready to consider what might look at first blush to be a severe test of the value of those studies. The university which today represents the extreme of modern educational theory, as I have already said, is the Leland Stanford University. In an article on "The Educational Ideas of Leland Stanford," published by President Jordan in the *Educational Review*, September, 1893, there are two succinct statements of the purposes of the University. One is in the words of the president: "The whole gift is devoted to education pure and simple, without any hampering clause, and with no other end in view than, through the extension of knowledge, to help humanity." With regard to this pronunciamento, I have only to remark that, if Mr. Stanford had no other end in view than the

extension of knowledge, no matter how well ordered it might be, then he meant to leave a large and precious part of the intellectual life unprovided for. I somewhat fear that the condition of things at the university which he founded must for some time be largely that which President Jordan's formulation of its purposes portends. But the founder himself, whether consciously or unconsciously, enunciated a larger aim, in words quoted in the same article. It is by these words that I am willing that the claim of the value of the humanistic studies should be weighed. They are as follows: "I would have this institution help to fit men and women for usefulness in this life, by increasing their individual power of production, and by making them good company for themselves and others." The statement is full of homely sense. It was clear to Mr. Stanford's practical mind that even the getting of a living does not fill the full field of the word "practical." The aim of our labor is undoubtedly to acquire that which will make life desirable, to increase the rewards of life—the *praemia vitae*. But Mr. Stanford saw that the pleasures of food, of warmth, of a well-cushioned chair, of convenient methods of locomotion, were not the only *praemia vitae*. He would train us so that we should be good company for ourselves and others. Well, then, if I am to be good company for myself, who forbids me to be so trained that I may understand, and, understanding, may watch with keen interest, the working of the *Zeitgeist* of this century, as it shows itself in the ways and temper of these United States, of this Canada, and even of England, of Germany, of France, of Italy, of Spain? Who forbids my finding pleasure in studying the ways and temper of the peoples who, a century ago, were shaping our present civilization for us? Who forbids me the keenest pleasure in the ways of the rich life and thought of Athens, of Alexandria, of Rome, which, two thousand years ago, were helping to make our present life? Who forbids me to enjoy reading my novelist, my poet, my philosopher, against a background of a large and varied experience of life—gained in part by travel, if possible, but in immensely greater part through the records which life has left in history, literature,

and art? In the case of another man, you certainly have not told me all I wish to know, when you inform me that he is able to make ten thousand a year, or fifty thousand, or even some unmentionable larger sum. I still desire to know what he practically gets out of life; what his pleasures are; how much of human activity is a sealed book to him. When he has done his day's work, does he find anything that belongs to him in the books which the world holds precious? If he lives where it is possible to see something of art, does he know good painting and good sculpture, and feel their charm? Would he, to apply Mr. Stanford's further test, be good company for *me*? Is he an interesting person, whose way of looking at things I should like to know? Does he understand what one means by "the intellectual life"? Is he a money-maker alone, or a fine intelligence? Life is not a system of manufactures, except for those who have to spend themselves in making our garments, grinding our flour, and planning and building our engines. It is a sum total of the working of subtle forces—a sum total made good and desirable by the untechnical things, first, of course, honorable living, and, on a plane lower than that alone, breadth of interests and sympathies, backgrounds, outlooks, intellectual tastes, appreciation—all those things which belong to the content of the much-abused but essentially sound word *culture*, the bringing of oneself to the best that one can be. It was because of the value of the falsely called unpractical things that Mr. James Russell Lowell, himself a great exemplar of a liberal education, said, when President Walker asked the faculty of Harvard College, many years ago, what their notion of a university was, "A university is a place where nothing useful is taught." As he explained in his *Harvard Oration* of 1886, he did not mean that students were to be tied to this or that, or that any subject should be denied them, to which a strong natural bent might lead; but that the day should never come when the weightier matters of a language, namely, such parts of it as have overcome death by reason of the beauty in which they are incarnated, such parts as are universal by reason of their civilizing properties, their

power to elevate and fortify the mind, should cease to be predominant in the teaching given at the university. "Let the humanities," said he, "be maintained undiminished in their ancient rights. Leave in their traditional pre-eminence those studies that are rightly called liberal; those studies that kindle the imagination, and through it irradiate the reason; those studies that manumitted the modern mind; those in which the brains of finest temper have found alike their stimulus and their repose, taught by them that the power of intellect is heightened in proportion as it is made gracious by measure and symmetry."

Let me now sum up, in a spirit of moderation, but without disguise, the claims which I have made, and in consequence of which I believe that, in the advance of education, there is no danger that humanistic studies will pass permanently into a secondary place. It has been seen that a young man or young woman, natural capacity being granted, may acquire five things in a college course: discipline; power of expression; information; outlook; the sense of the noble and beautiful in literature. The first acquisition, the training of the mind to accurate action, I have maintained, may be had from humanistic studies, and have conceded that it may be had from scientific studies. My own view is that both kinds of discipline, for different reasons, are necessary, and that something of both should therefore be prescribed in that part of education which serves as the foundation for specialized elective work. The second acquisition, the power of expression, is obviously, as has been said, to be had in larger degree from humanistic studies, and in smaller degree from scientific. As regards the fourth acquisition—to pass the third for the moment—I am entirely willing to make a concession, which, however, is rather apparent than real. The outlook which a man should have upon life is certainly incomplete unless he has learned to see nature from something like the point of view of modern science. But, in the first place, I have asserted that the study of natural science should form a part of every education, and I will gladly add that it ought to begin in childhood. And, in the second place,

it is clear upon an instant's thought that no man who devotes any part of his time to reading is in danger of passing through life untouched by the spirit of this study. Our newspapers, our monthly magazines, are full of it; while one would not get far, even if these were safer guides than they are, by trusting to them for his conception of *ancient* life and thought.

With regard to the third acquisition, that of the information one carries away from college, a point is often scored, with supposed telling effect, against humanistic studies, and especially against the study of the classics. It is said that a man forgets even how to read his Greek and Latin. Undoubtedly he often does, sometimes, perhaps, for the reason that he has never learned. But what an unthinking world it is! I would challenge any ordinary professional man who has been out of college for fifteen years to deduce the formula for the parabola or the ellipse. Much rather, I fancy, would a man attempt to read again some once familiar page of Horace; and, badly as he might fare in trying to get the meaning out of a page of Cicero at sight, he would in most cases come off better than if he attempted to solve at sight a problem in spherical trigonometry. In point of fact, the information gained from humanistic studies does not suffer by comparison with any other in respect of its subsequent fate. But the greater fact is that what one carries away and really keeps, outside of mental habits and the power of expression, that which lasts longest of all is not information at all, but the fourth and fifth items of our count—outlooks, horizons, backgrounds, appreciation—the power, to use Arnold's words about Sophocles, "to see life steadily, and see it whole." This has its immense value for the man himself—for his mental sanity, and his enjoyment of life; and it has its immense value for the man in his relation to his fellow-workers.

I infer, then, that when one comes to count the sums total of acquisition conferred respectively by the humanistic and the scientific training—discipline, power of expression, information, outlook, appreciation—the advantage, for the average untechnical man, lies with the former.

Is this a solution in the air? Have we been spending an idle hour in dreams? What are the facts of experience? Here, then, we are driven back, in spite of our protest, to the test of fact. But let us trust our impressions in the large, rather than our memory of this or that man. What is it that gives the lawyer, the physician, the politician, the man of business his power of carrying others in the direction in which he wishes them to go? What makes the leader? Undoubtedly in part his skill and special knowledge in that particular thing which he has elected to do. What next? We are pitted against one another in business and professional life, and in social life. Temperament will tell, and physique will tell. But what comes next after these is not a knowledge of physics and chemistry, of astronomy, of biology. If facts are wanted, the facts of history, of literature, and of art will go farther in the life of the untechnical man than the facts with regard to the processes which fill the air of our cities with the smoke of manufactures. A knowledge of the constitution of Athens under Solon, remote as it is, is as likely to come *à propos* as is a knowledge of the constitution of molecules. But the most practical thing of all—to say it for the last time—is none of these. It is the power of seeing rightly, and in its broader relations, what other men see less rightly and more narrowly, and of so expressing oneself that they shall see it. It is the power of thought and feeling. This is obvious enough in the ordinary life of a community, but it is startlingly obvious in the great crises of national life. The two most potent forces which this generation of Americans has seen, the forces which, more powerfully than any others, have determined the courses of human life in remote places and for remote times, have been, not the steam engine and the electric circuit, but love of country and hatred of the oppression of man by man—sentiments quite as likely to be fostered in the young student's breast by the *Persians* of Aeschylus or the Epic of Virgil as by Puckle's *Conic Sections* or Williams' *Chemistry*.

And yet—let me say once more—you must not mistake me. I believe in conic sections and in chemistry as de-

voutly as I do in Greek and Latin, and, wherever any man says they shall not be taught in universities with the utmost freedom, and on terms of perfect equality with the inherited curriculum, I am with the mathematician and the chemist and against him. But my reason is, not the unthinking claim that a knowledge of these things can be brought to bear in the daily life of a professional man or a business man, while a knowledge of history, of literature, or of art cannot, but that the human mind has a right to whatever its natural tastes and aptitudes demand. Let us have industrial schools for workmen—Heaven knows that we need them; let us have technical schools to train up directors of great works and possible inventors; and let us have the liberal education, with great range of individual choice, for the other careers. Let us grant with all our hearts that, in the dye-factory, a knowledge of chemistry is practical and a knowledge of Greek unpractical; but let us not delude ourselves, or suffer others to delude us, with the popular fallacy that the same thing holds in the office of the lawyer, the doctor, the editor, or the business man. Let us not turn from the worship of a college fetich to bow down before a fetich of the market-place. Let us not believe that the day is coming when man is to be defined as a manufacturing animal, and the leading university is to be the one in which, in popular phraseology, nothing useless is taught.

THE DISINTEGRATION OF A HIGH-SCHOOL CLASS A STUDY IN ELIMINATION

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Superintendent of Schools, Anoka, Minnesota

The problem.—School superintendents are interested in the fact that so many students drop out of school even after they have successfully passed the perils supposed to be incident to the grammar grades and have gained admission to the high school. The record of one such class is presented here.

The environment.—Anoka is a place of about four thousand people, situated nineteen miles from Minneapolis. Its inhabitants are blessed with considerable material comforts and a goodly share of intellectual ones. There is a fair public library, and many fraternal orders and churches. There are a few small factories and mills, but the business consists mainly of trade with the surrounding agricultural district. The village of Champlin, across the Mississippi, sends its children to the Anoka high school, itself maintaining only the eight grades.

There is an abundance of adult labor in the market, so that there is very little need or temptation for boys of high-school age to go to work. On the contrary, public opinion is very strongly in favor of the young people remaining in school as long as possible: The town is one where the school sentiment is strong. A large proportion of those who graduate go to higher institutions.

The school itself ranks among the largest and the best in the state. It is on the accredited list of the North Central Association. It has a faculty of nine teachers besides the superintendent. Its home is a new, well-equipped building, centrally located. A liberal variety of work is offered, with a wide range of electives both as to courses and as to subjects within the courses. There is work in commercial and industrial subjects, and a normal training department for prospective rural teachers. About 35 per cent of the pupils are non-resident, coming in from the surrounding farms and villages.

The class.—The class that entered the high school in September, 1907, numbered seventy-three—twenty-three boys and fifty girls: about the usual proportion. The tables which follow summarize the recorded history of the class.

TABLE I

| GROUP | RECORD | BOYS | GIRLS | TOTAL | |
|------------|---|------|-------|--------|----------------------------|
| | | | | NUMBER | PERCENTAGE OF ALL ENTRANTS |
| 1.... | Remained four years and graduated..... | 5 | 13 | 18 | 24.6 |
| 2.... | Remained four years but did not graduate... | 5 | 11 | 16 | 21.9 |
| 3.... | Remained three years and then dropped out. | 1 | 2 | 3 | 4.2 |
| 4.... | Remained two years and dropped out during the third year..... | 0 | 0 | 0 | 0.0 |
| 5.... | Remained two years and then dropped out... | 1 | 3 | 4 | 5.4 |
| 6.... | Remained one year and dropped out during the second year..... | 0 | 3 | 3 | 4.2 |
| 7.... | Remained one year and then dropped out... | 4 | 6 | 10 | 13.7 |
| 8.... | Dropped out during the first year..... | 6* | 10 | 16 | 21.9 |
| 9.... | Attended only parts of three years..... | 1 | 1 | 2 | 2.7 |
| 10.... | Attended only parts of two years..... | 0 | 1 | 1 | 1.3 |
| Total..... | | 23 | 50 | 73 | 100.0 |

* Two of these boys worked until the year 1910-11, when they again entered school, one at the beginning of the year, with the avowed intention of graduating, and the other at the beginning of the second semester, for the remainder of the year only.

TABLE II

| GROUP | RECORD | BOYS | | | GIRLS | | | TOTAL | |
|--------------|--|--------|--------------------------------|---------------------|--------|---------------------------------|---------------------|--------|----------------------------|
| | | NUMBER | PERCENTAGE OF ALL BOY ENTRANTS | PERCENTAGE OF GROUP | NUMBER | PERCENTAGE OF ALL GIRL ENTRANTS | PERCENTAGE OF GROUP | NUMBER | PERCENTAGE OF ALL ENTRANTS |
| I (1).... | Remained four years and graduated..... | 5 | 21.7 | 27.7 | 13 | 26.0 | 72.3 | 18 | 24.6 |
| II (2) ... | Remained four years but did not graduate | 5 | 21.7 | 31.2 | 11 | 22.0 | 68.8 | 16 | 21.9 |
| III (3-10) | Dropped out before the fourth year.... | 13 | 56.4 | 33.3 | 26 | 52.0 | 66.6 | 39 | 53.5 |
| Totals | | 23 | 100.0 | 31.5 | 50 | 100.0 | 68.5 | 73 | 100.0 |

Additions to the class.—There came into the class in its second year in the high school three new members. These all dropped out of the class, but remained in school until the fourth

year. Four others joined it during the third year. Of these, two removed from the city, one dropped into a lower class, and one graduated. One student entered the class in the Senior year and graduated.

The causes of elimination.—Of course the important thing is to ascertain the causes of the serious amount of elimination from this class, whose record, we think, is by no means exceptional. On examination of the records, which are complete so far as the mere matter of standings is concerned, we find the following conditions to have prevailed at the time the individual students left school:

| | |
|--|-------|
| Failing in all subjects | 10 |
| Failing in three subjects | 2 |
| Failing in two subjects | 11 |
| Failing in one subject | 5 |
| Up to grade in all subjects..... | 7 |
| No records (left during first month)..... | 2 |
| Failing in all work, but really left to marry..... | 2 |
| Total | 39 |
| Number Percentage | |
| Failing in greater or less degree..... | 30 |
| Up to grade in all work..... | 7 |
| Unknown | 2 |
| Totals | 39 |
| | 100.0 |

These numbers show that 59 per cent of those who dropped out were failing so badly that satisfactory progress through the course was improbable if not impossible, while about 18 per cent were all right in their studies. Many of these removed from town, but some left without any apparent reason. Another 13 per cent were failing, but to so small an extent that the recovery of their classification could reasonably be expected.

The strong hold of the school upon its students, backed by the fine school sentiment of the community, can be seen in the fact that sixteen who failed to keep up with the class nevertheless remained in school.

We can here see the superficial causes for the elimination of pupils from the high school. Back of them lie the real causes.

If a student drops out because he is failing in his work, the legitimate inquiry is, Why does he fail in his work? What things in the make-up of the student or in his environment made him fail? No school records show these. Few, if any, schools attempt to find them out. Was failure due to home influences; to outside influences: parties, dances, shows, tobacco, poolroom, loafing; to school influences: unattractive courses and buildings, ill-prepared or unsympathetic teachers; or to what complex combinations of all these things?

The reports of the State High School Inspector and of the National Commissioner of Education show that approximately 12.5 per cent of the enrolment of the high schools graduate each year. This school has an average record of nearly 17 per cent of its enrolment in the graduating class. Hence many other schools must have classes that disintegrate as rapidly as the one discussed.

The mortality seems to be too great. What can be done to avert such losses?

A friendly critic who read the above in manuscript wishes the writer to "discuss the question of whether the standards of this school are not too high for its constituency."

We think not. The course and the texts are those usual in the high schools of the state. The final examinations are not governed by local ideas, but are those prepared under the auspices of the State High School Board and used generally throughout the state. Moreover, the people here are of a high grade of intelligence and possess a degree of education and culture above the average as individuals and as a community. This is shown by a variety of things: by the churches and clubs, social, literary, and recreational; by the patronage of the city library, which was founded years before the Carnegie era began; by the attendance on the high school, constituting about 25 per cent of the total school enrolment; by the interest of the adult citizens in school affairs; and by the fact that the average ratio, taken through a series of years, of graduates to total enrolment in the school is above the average for the state or the nation.

The further fact that the class studied falls only two or three per cent below the average ratio, for this school, of graduates to enrolment indicates that many other schools must be in like condition. The actual disintegration has been unsuspected, probably, because the records have not been carefully studied. Our purpose in committing these figures to print is to induce just such study and then, if possible, to find the remedy.

SOME ASPECTS OF THE CHILD-WELFARE PROBLEM IN THE NEW YORK HIGH SCHOOLS¹

BENJAMIN C. GRUENBERG
The Commercial High School, Brooklyn

A committee of the High-School Teachers' Association of New York City was appointed in the spring of 1910 to prepare for the Child Welfare Exhibit, which was to have been held in the fall of the same year, a suitable presentation of the child-welfare problem from the high-school teacher's point of view. On account of the limited space and the shortness of the time available it was decided to concentrate the efforts of the committee upon a few points which might be expected to lead to practical results.

I. THE NEED FOR HIGH-SCHOOL ACCOMMODATIONS

To illustrate the need for increased high-school accommodation in the city of New York, a comparison was made between the high-school register of this city and those of several other cities; and a map of Brooklyn, prepared by Mr. Kingsley two years ago for the Committee on High-School Accommodations of this association, showing the distribution of girls and boys attending high schools in relation to the location of the high-school buildings was exhibited. The average time and the total money spent in street-car travel by these pupils had been carefully calculated, and the figures placed under the map, and the regions in greatest need of new high schools (in all boroughs) indicated.²

¹ The report of the Committee of the High-School Teachers' Association of New York City on the Child Welfare Exhibit: Benjamin C. Gruenberg, *chairman*; Clarence D. Kingsley, Ellen E. Garrigues, Henrietta Rodman, Eli W. Weaver, Alexander L. Pugh, Joseph K. Van Denburg. For various reasons the material prepared by the committee was not used at the Child Welfare Exhibit. A set of charts presenting most of this material was prepared with the assistance of pupils in the drawing classes of one of the high schools, and these were exhibited at the annual meeting of the association, May 4, 1911. The Report will be printed in the *Yearbook* of the association.

² See Mr. Kingsley's report in the *Yearbook* for 1908.

TABLE I
HIGH-SCHOOL REGISTER (1909) PER 1,000 OF POPULATION (1910)

| | | | |
|-------------------|------|------------------|------|
| Milwaukee..... | 9.0 | Boston..... | 12.5 |
| Providence } | | Los Angeles..... | 13.6 |
| Cleveland } | 9.6 | Washington..... | 14.5 |
| Buffalo..... | 10.3 | New Haven..... | 15.3 |
| Detroit..... | 11.1 | Seattle..... | 16.6 |
| Louisville..... | 11.6 | Minneapolis } | |
| Saint Paul..... | 11.8 | Denver } | 18.5 |
| Indianapolis..... | 12.3 | Kansas City } | |
| | | New York | 7.7 |

To provide for its children the same high-school accommodations as are given by Minneapolis, Denver, and Kansas City, New York would need 78 high schools instead of 20.

We need more schools. We need smaller schools.

2. THE NEED FOR VOCATIONAL DIRECTION

On the basis of statistics gathered by Dr. J. K. Van Denburg,³ there was prepared a chart showing, in percentages, (a) the occupations of the parents of high-school pupils (classified according to the United States Census schedules used in 1900; (b) the occupations of the adult population of the city of New York, according to the 1900 Census; and (c) the occupations for which the high-school pupils intended or hoped to prepare themselves.

A comparison of these figures brought out strikingly the conclusions that certain classes of the population do not make the same use of the high schools as do other classes, either because they cannot afford to keep the children in school so long, or because the schools do not offer what they consider worth while for their children; and that the aspirations of high-school pupils are directed toward certain callings out of all proportions to society's needs for services in those callings, while interest in other callings is destroyed, and preparation for these neglected.

As a result of Mr. Weaver's studies in vocational guidance, he has had prepared a chart showing a plan for organizing vocational direction in connection with the high schools.⁴

³ This material is to be published separately under the title, "A Study of Elimination in New York City High Schools" (Teachers College).

⁴ See Mr. Weaver's report for the Students' Aid Committee, in the *Yearbook* for 1911.

3. THE NEED FOR MODIFIED COURSES

The need for different types of instruction in high schools may be inferred from Dr. Van Denburg's investigations, and is further emphasized by the apparently aimless drifting of our high-school population.

TABLE II

THE DRIFT OF THE HIGH-SCHOOL PUPIL

- Two-thirds of our elementary-school graduates enter high schools.
- In 1910 these amounted to 23,202.
- Ninety per cent of those who enter never complete the course.
- Two-thirds of those who enter complete less than one year of the course.
- Fifty-five per cent of those who enter come with the hope of completing the course.
- Less than 10 per cent do complete it.
- Every year 30 per cent of our high-school pupils are discharged.
- Every year we discharge enough pupils to fill eight good-sized high schools.
- There is urgent need for special short courses for those who can stay but a short time.⁵

4. THE PHYSICAL WELFARE OF HIGH-SCHOOL PUPILS

On the subject of the physical welfare of high-school pupils, there were prepared three charts: (a) on the school luncheon; (b) on gymnasiums and bathing; and (c) on medical inspection. In the preparation of these considerable assistance was rendered by Dr. Louis I. Dublin, of the Biology Department of the Commercial High School.

TABLE III

LUNCHES

In all but five of the high schools lunches may be purchased by the pupils within the building.

- In all but four suitable rooms are provided.
- In seven of the high schools supervision of lunchrooms includes control over the character of the food and the prices.
- In one high school⁶ the whole equipment and management are completely in the hands of the faculty.

⁵ A two-year vocational course has already been introduced into the Chicago high schools. The High School of Commerce (New York) is planning to introduce a special short course for pupils who intend to stay but a short time.

⁶ Commercial High School, Brooklyn.

In one high school⁷ the whole equipment and management are completely in the hands of the general organization.

All high schools give instruction on the subject of proper luncheon.

Not all provide opportunity for selecting proper luncheons.

TABLE IV
PHYSICAL WELFARE

Most of our high schools have no bathing facilities in connection with the gymnasium equipment.

In only two high schools is bathing a regular part of the gymnasium exercises.

In eight high schools bathing is encouraged in connection with after-school activities.

Swimming is taught in only one of the high schools.

In every high school regular gymnasium exercises come immediately after lunch for from three to twenty classes per week; although in every biology department the unwisdom of violent exercise after eating is systematically taught.⁸

With one exception all high schools give instruction in hygiene and sanitation for from two to ten weeks during the first year. This is generally supplemented by the physical training teachers.

TABLE V
MEDICAL INSPECTION

**What the Medical Inspector
Does in Nine Schools**

- 1. Signs name in book.
- 2. Leaves building.

What He Might Do

- 1. Examine pupils taken sick during school hours.
- 2. Examine backward pupils for remediable defects that cause retardation.
- 3. Examine pupils who are frequently absent.
- 4. Co-operate with principals and teachers to raise health standard of schools by
 - a) Occasional talks on health topics.
 - b) Supervision of luncheons.
 - c) Advice to individual pupils.

Best results are obtained where a physician is a member of the teaching staff either in the Department of Biology or of Physical Training.

⁷ Manual Training High School, Brooklyn.

⁸ Since February 1, 1911, one of the largest high schools has arranged its program so as to have none of the gymnasium work fall immediately after lunch.

5. A SUMMARY STATEMENT OF SOME HIGH-SCHOOL NEEDS

It was decided to present in one chart a number of brief statements as to high-school needs, in the expectation that they would be accepted as obvious, or be challenged and thus lead to profitable discussion of important problems.

TABLE VI
SOME HIGH-SCHOOL NEEDS

Guidance of pupils in choice of vocation; in selection of studies; in learning to use the school and other institutions.

Co-operation with parents and with other city departments.

Differentiated opportunities.

Short courses in practical work and inspiration for short-term pupils.

A change in the child-labor law that will require more than perfunctory attendance as evidence of satisfactory scholastic attainments.

Simpler courses of study: more flexible courses: so that pupils may concentrate on a few subjects; so that teachers may know students better; so that thoroughness and economy may replace superficiality and wasted effort.

Smaller classes: more teachers. More than half of the high-school teachers have to know over 150 pupils each term.

Personal influence is dissipated; there is no time to think; teachers become mechanical; mechanical teachers are not economical.

More high schools: smaller high schools.

DISCUSSION

THE COMMISSION FORM OF GOVERNMENT AND THE PUBLIC-SCHOOL SYSTEM

I have watched, with small returns, the educational journals for notes and articles giving evidence of attention on the part of school men to the bearings of the movement toward the commission form of municipal government upon school organization. There seems to be too little concern about the possibilities of this development. Even university courses in organization and administration have in many cases not yet taken up the subject.

From the organizations urging the new form of government there is also little material to be secured. Sacramento, Cal., has in charge of education one of the five commissioners, whose acts are reviewed by the board. In the second-class cities of Kansas one of the three commissioners has the unusual task of taking charge of education and finance. In most of the cities adopting the commission form the schools have been unchanged, because of their organization as a district distinct from other units. In some cases, as the bosses have come to understand the movement, they have not been slow to avail themselves of the chance to take advantage of the change for their own purposes. There is need of watchfulness and of participation on the part of all who have concern in the schools. Probably there has been much of both, but it is time for the evidence to be forthcoming.

FRANK A. MANNY

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DEBATING IN THE HIGH SCHOOL

In an article published in the October *School Review*, Miss Bertha Lee Gardner subjects inter-high-school debating to a microscopic analysis, and finds it literally cankered with corrupt practices and corroding influences. She finds that this insidious institution, by its second-hand, superficial, quibbling, and insincere method of handling questions far too ambitious for high-school pupils, has sapped the moral fiber of our students and bred an insincerity of conviction. She deplores the idea of "contest," and thinks the ethics of the inter-high-school debate below those of the mediaeval tournament, the prize fight, and even below the parlous depths of inter-high-school athletic contests. She does not approve of springing surprises on one's opponents, and regards the advance preparation of rebuttal as regrettable if not actually reprehensible. That the efforts of the coach are reflected in the work of the debaters indicates a condition which Miss Gardner thinks in need of immediate reform.

Is not this arraignment a trifle too severe?

When it is conceded that the coach is indispensable to successful inter-high-school debating, and when it is further agreed that debaters frequently reflect the peculiar style and methods of their coach, has any further criticism been passed than with equal truth must be given to the teacher and the text who first guide the boy's unwilling feet into the labyrinth of literature? Could anything be more superficial; could any judgment be more second-hand; could any language be less spontaneous than when the boy attempts a comparative criticism of various styles and authors? The student in physics and chemistry, while supposed to be working out laws and principles for himself, rarely does anything of the sort. He accepts of necessity some "second-hand" knowledge, and consequently makes progress. Left by himself to mess with the compounds found in the laboratory, unguided by information which someone else had compiled for his benefit, the average student in his "spontaneous enthusiasm" would accomplish little of value. Without the assistance of a coach, how is the boy to inform himself as to the construction of a really effective argument? Who is to give the boy the instruction and training necessary to a really convincing style of delivery? Is the whole practice of inter-high-school debating to be condemned because the boy unconsciously imitates the gestures and methods of the coach? It would be as logical to condemn the work of the normal critic teacher because her students adopt many of her personal peculiarities and mannerisms. The aspersions cast by Miss Gardner on the part played by the coach in inter-high-school debating, unfortunately for her argument, are rendered innocuous by the records in after-life of the men whom the coach has trained. Out of the high school and away from his influence, these young men have carried into colleges and universities, into the law and the ministry, an ability to argue logically, speak convincingly, and investigate thoroughly. The debating coach, more than any other teacher with whom these boys have come in contact, has given them this training. The writer has investigated the out-of-school record of a score of debaters trained under the pernicious influence described by Miss Gardner, and in nearly every instance discovered that the boy, either in college or in business or the professions, has demonstrated his ability to speak convincingly and investigate carefully. None of them appear to have had their morals undermined and none of them seem incapable of sincere conviction. Not one of the twenty but retains to this day an active interest in the public questions which he debated while in high school.

Miss Gardner complains that the tendency of present-day debating is to develop sharers instead of thinkers. Is not this what G. Stanley Hall would call a feminine argument? In an age when legal technicalities play so large a part in the transaction of everyday business, when all scientific investigation worthy of the name is dependent on precise thinking, is there anything reprehensible in a debater insisting upon a strict interpretation of the question under discussion? Last year the writer listened to a debate on the question: "Resolved: That All Cities in Michigan Should Have a Commission Form of

Government." The negative insisted that the commission form of government did not necessarily involve the referendum and recall, and substantiated their argument by citing some fifteen cities having the commission form of government which did not have these reforms. The affirmative were surprised, and their whole argument was vitiated, because they had assumed that the commission form of government necessarily involved the referendum and recall. The affirmative were beaten because their preparation of the question was less intensive than that of their opponents. The writer has taken part in, judged, coached, and listened to over two score debates, and has never heard a question more strictly construed than a careful business man should construe the text of a paper he is about to sign. Is a training which puts a premium on careful statement, strict interpretation, and accurate expression ethically inferior to the prize fight? One fears that Miss Gardner's knowledge of the prize ring must be "second-hand." As to Miss Gardner's inference that only in inter-high-school debates are surprises ethically permissible, it might be said that the baseball pitcher, the football quarter, and the basketball captain move heaven and earth to accomplish a play for which their opponents are unprepared. Nowhere in the realm of sport is the chance to guard against surprise greater than in debating. Nothing but thorough preparation is required. Fulness of preparation cannot but prepare the debater for rebuttal of his opponent's arguments. That he writes in advance his replies to statements which he anticipates is a practice which has the sanction of usage by every public speaker worth listening to. Lincoln knew exactly what he would ask Douglas and what he would say to the reply that Douglas would make. The lawyer who goes into court unprepared to answer an argument which he knows his opponent is liable to make is either exceptionally able or exceptionally foolish. But it is a great error to suppose, because a boy has prepared in advance his answers to the possible arguments of the rival team, that he does nothing worthy on rebuttal. He must allow properly for his time, he must select the most vulnerable point for attack, he must avoid inconsistencies, and he must arrange his material so that it will appear to the greatest advantage. Rapid thinking, quick wit, earnestness, and confidence are requisite to good rebuttal, and very few debaters escape without the cultivation of these qualities. The writer saw a high-school boy from Burlington, Ia., with a blackboard and chalk, completely refute in a three-minute arithmetical operation an obviously unforeseen argument of the rival team. Another lad from Davenport, Ia., the last speaker for his team, combined his constructive and rebuttal speeches, and for fifteen minutes, in rapid, forceful, and coherent English, he assailed the argument of his opponents in a manner that left no doubt that his speech was constructed as he proceeded. Another debater from Cedar Rapids, Ia., upon rebuttal quoted five authorities on a controverted point which could not have been other than unexpected. In a debate between the high schools of Grand Rapids and Petoskey, Mich., on the "exclusive control of railroads by the federal government," there was no dispute over the

word "control," but there appeared to be a difference of opinion as to the word "exclusive" as applied to government control. One boy used a dictionary, another quoted two supreme-court decisions, a third appealed for what he called a common-sense interpretation of the question, a fourth called attention to an inconsistency in the arguments of the rival team, a fifth recapitulated the whole case. Such work deserves better characterization than to be dubbed second-hand, servile, and superficial.

Miss Gardner suggests that public questions are too ambitious for high-school students. Does this mean that the future citizens of the Republic shall not concern themselves with vital issues before their city, state, or nation? And if, in spite of their course of study or because of it, they do become acquainted with some of the great questions of public policy, should discussion be prohibited because, forsooth, Congress sits year after year without reaching a satisfactory solution? If, peradventure, such discussion engenders sufficient interest to produce a formal debate involving a thorough search for material and a careful arrangement of arguments, is it a matter to be sneered at as being too ambitious? Again, could any debate on a vital public question be more second-hand than a discussion of some of the subjects that Miss Gardner suggests as substitutes: "Could Brutus have saved the republic?" "Was the execution of Charles I justifiable?" etc.? The discussion of such subjects may be desirable for the life they put into a recitation, but after all they are largely superficial, always second-hand, and never vital. The whole class never take part in them except in theory, and without the assistance of the boys interested in formal debating such discussions would lose a large part of that spontaneity of which Miss Gardner thinks them so productive. Surely there is as much sincerity on the part of the Iowa boy debating the commission form of government or the Michigan boy discussing the primary-school money as there is in the boy's opinions on Hamlet's sanity. Could the average boy be more superficial in his discussion of a vital public issue than he is in his comparison of Themistocles and Aristides?

As to debating topics of local interest only, one cannot but wonder whether the supply of questions will be sufficient. It is also a matter of serious doubt whether the interest which Miss Gardner has aroused in the discussion of these purely local questions would have been possible without the influence of the formal high-school debate. It is the idea of "contest" that has popularized debating. The despised rhetoricals and the now defunct declamation contest were succeeded by the formal oratorical contest, which has attained a measure of popularity and is still with us. But it has been the formal debate that has made public speaking really popular. The institution which Miss Gardner finds so pernicious has made it popular to investigate public questions; it has set a standard of excellence in the arrangement of effective argument; it has stimulated an interest in real oratory, which Cicero defines as the power to convince. It has required no compulsion to insure its success. The writer has known as high as 30 per cent of the Junior and Senior boys to enter the preliminary

contests, held for the purpose of selecting the team to represent the high school. In nearly every high school where there is the custom of inter-high-school debating, a debating society or student congress supplies an abundance of material anxious to compete for the honor of representing the high school in the formal debate. If it is true that the attention of the coach is concentrated on a few, the remedy is to have more coaches rather than to diminish the activities of those we already have.

In conclusion, is it not well in the criticism of any institution to refrain from underestimating its real services? The defects inevitable to any school activity should not blind one to its undeniable merits.

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EDITORIAL NOTES

One of the most pronounced tendencies in modern educational advance is the attempt to realize more nearly the ideals of free, public, universal education.

FEDERAL AID FOR VOCATIONAL SECONDARY EDUCATION This attempt is leading school authorities everywhere to extend facilities downward, and especially to diversify opportunities for pupils entering upon the secondary period of education.

Furthermore, there is a growing consciousness that the secondary period of education should more nearly coincide with the actual secondary period of the development of the growing child. This may be said to begin with early adolescence, or, approximately, when the average child is in the sixth or seventh grade. Plans already in operation for differentiating the work of pupils at the seventh grade exemplify the efforts which are being made to provide training specifically appropriate for each individual.

The tendency to diversify educational opportunities in the lower schools is seen nowhere more clearly than in recent educational legislation, notably in the states of Maine, Massachusetts, New York, New Jersey, Connecticut, Ohio, Pennsylvania, Michigan, Indiana, Wisconsin, and Minnesota.

It is especially worthy of note that bills now before the national Congress show a like tendency to popularize education.

When, in 1862, the Morrill act became a law, a great impetus was given to education in the practical arts but the schools established under that act were, generally speaking, of college grade. The graduates of these schools have shared with the graduates of colleges generally the distinction of filling professional and managerial positions. The bills now before Congress seek to promote instruction in agriculture, trades and industries, and home economics, in schools of secondary grade, and the special training of teachers for these subjects in normal schools. They would therefore exert an influence as far down as the elementary schools.

As early as 1908 Mr. Davis of Minnesota introduced in the House of Representatives a bill which, with some modifications, has been presented in succeeding years, and which is now before the Committee on Agriculture as H.R. 6333. A similar bill was presented by Mr. Wilson of Pennsylvania in April, 1911, as H.R. 2907.

Senator Page of Vermont introduced in April, 1911, Senate bill No. 3. This bill is similar to the House bills, though with an important addition, and

THE PAGE BILL is essentially identical with that presented by the late Senator

Dolliver in January, 1910. In certain circles this bill was commonly referred to as "labor's bill," and it was known to be entirely satisfactory to the leaders of the industrial-education movement of the American

Federation of Labor. When it is recalled that the late Carroll D. Wright, an authority both in education and in industry, expressed the opinion that no plan of industrial education would succeed which was not acceptable to organized labor, this approval is significant.

The Page bill, which has been referred to the Committee on Agriculture and Forestry, seeks "to co-operate with the states in encouraging instruction in agriculture, the trades and industries, and home economics in secondary schools; in maintaining instruction in these vocational subjects in state normal schools; in maintaining extension departments in state colleges of agriculture and mechanic arts; and to appropriate money and regulate its expenditure."

By the provisions of the bill four points of contact are to be established with existing educational institutions: first, with regular secondary schools; second, with state district agricultural secondary schools; third, with state colleges of agriculture and mechanic arts; fourth, with state and territorial normal schools.

The details of these propositions, considered under the above classification, are:

First.—That five million dollars be appropriated annually, beginning with the year ending June 30, 1915, for instruction in the trades and industries, home economics, and agriculture, in public secondary schools, the amount to be allotted to the several states and territories in proportion to their population as determined by the census of 1910.

Second.—(a) That four million dollars be appropriated annually for instruction in agriculture and home economics in state district agricultural schools of secondary grade.

(b) That one million dollars be appropriated annually for maintenance of branch agricultural experiment stations to be located in these agricultural schools.

In the case of both (a) and (b) the appropriation is to be available for the year ending June 30, 1915, and is to be allotted in proportion to the number of persons engaged in agricultural pursuits, as shown by the census of 1910. Special provision is made for states and territories with less than one hundred thousand persons so employed. The appropriation for (b) is to be available only after the state or territory shall have provided at least an equal amount for the same purpose.

*Third.**—That five hundred thousand dollars be appropriated for the year ending June 30, 1913, and annually thereafter, for maintenance of extension departments in state colleges of agriculture and mechanic arts, established under the provision of an act of Congress approved July 2, 1862, and that ten thousand dollars of this sum be allotted annually to each of the forty-eight states and territories, and twenty thousand dollars to the Office of Experiment Stations of the Department of Agriculture. The departments are to be devoted to instruction and demonstration in agriculture, the trades and industries,

* This item is not included in the House bills.

home economics, and rural affairs, for persons not resident at these colleges nor at the secondary and normal schools provided for in the act. It is further provided that regularly increasing additional sums shall be appropriated until, in the year ending June 30, 1918, and annually thereafter, the additional amount will be one million dollars. This sum is to be allotted in proportion to the number of persons engaged in "agriculture," although, as above noted, the instruction includes "trades and industries." It is also provided that the additional sums shall be available only after the state has established such an extension department, and has provided an appropriation for that work at least equal to the additional amount annually allotted to the state for that purpose.

Fourth.—That one million dollars be appropriated annually, beginning with the year ending June 30, 1913, for the maintenance of instruction in agriculture, the trades and industries, and home economics, in state and territorial normal schools, the amount to be allotted in proportion to the population, with the addition of three thousand dollars annually for states and territories with less than three hundred thousand inhabitants.

Ample appropriations and authority for administering the act are provided, and the co-operation of the Secretary of the Interior, the Secretary of Commerce and Labor, and the Secretary of Agriculture is secured. No state or territory will be entitled to the benefits of the act unless, "in the judgment of the Secretary of the Interior, it has made ample preparation to utilize to advantage" the federal aid given thereby.

The purpose of the proposed legislation seems to be to provide well-rounded vocational courses as well as general preparation for agriculture, trades and industries, and home-making, suited to the respective sections of the United States. It includes encouragement for those permanently engaged in these vocations, and "not necessarily graduated from elementary schools" by the establishment of short, practical courses. It purposed to promote earlier interest in the scientific study of these fundamental human activities by giving appropriate instruction in specialized normal courses. The movement to furnish an adequate education for the agricultural and industrial workers of the country is now well under way, and renewed interest would certainly be stimulated by the passage of the Page Bill. The bill deserves the careful reading and, we believe, the active support of those who hope for the rapid extension of free, public education.

FRANK M. LEAVITT

BOOK REVIEWS

The Aeneid of Virgil Translated into English Verse. By THEODORE C. WILLIAMS. Boston: Houghton Mifflin Co., 1910. (The Riverside Literature Series.) Pp. xxiii+503. \$0.75.

The publishers have performed a real service for American education by reissuing in inexpensive form the latest and best American translation of Virgil's *Aeneid*. It is well to have such a book within reach, not only of every school library and every teacher, but also of every student of Latin, and even more of every student so unlucky as not to take Latin. Like all the publications of this firm, the volume is beautifully printed, from the same plates as the first edition (1908), from which it differs in the size and quality of its paper, in its cheaper binding, in the new Introduction—better suited to the schoolboy than the admirable original one—and in the addition of illustrations and notes which enhance its attractiveness and usefulness as a school book.

Why another attempt at translating Virgil, and another attempt in blank-verse? I confess to a prejudice against verse-translations in general and against blank-verse in particular, due chiefly to the fact that such radical change in metrical form carries one wholly out of the atmosphere of the original, and that blank-verse needs such a master-hand that it has rarely with real success been employed by translators. We are not likely to have a Milton, a Keats, a Shelley, or a Tennyson turning his hand to the laborious task of translating a long poem. Bryant's *Homer*, a recognized American classic, is a respectable—that is to say, mediocre—performance, giving, for all its fidelity, a poorer idea of the Greek even than Pope's brilliant paraphrase. If one must get at great poetry through the unsatisfactory medium of translation—we are often tempted to say in despair—commend us to such prose as that of Mr. Andrew Lang! Yet, in spite of this prejudice, as I have read this latest attempt at the impossible I have found myself kindling into a real enthusiasm for Mr. Williams' achievement.

Matthew Arnold said of blank-verse that in order to pour Homer into the mold of this meter the translator will have entirely to break him up and melt him down, with the hope of then successfully composing him afresh; and this is a process which is full of risks. "The result of such an attempt to renovate the old poet may be an Aeson; but it may also and more probably will be a Pelias." This process Mr. Williams seems to have followed with Virgil, and with surprising success. The new Virgil that issues from his alembic not only is fair and vigorous, but also bears a real resemblance to his former self, in spite of the perilous sea-change he has suffered in passing from his native element, the Latin hexameter, into the entirely different element of English blank-verse. In short, this version is the most Virgilian of all the versions: as a representation of the Latin it is sufficiently faithful and correct; and as an English poem it has the high Virgilian qualities of grace and sweetness, tenderness and deep feeling, and—to some extent, at least—stateliness and dignity. It has a really epic quality that should give to those who are so unhappy as not to know the original something, at any rate—a good deal, perhaps—of the almost indefinable

and incomunicable charm of the world's best-beloved poet. Mr. Williams has caught the trick of the grand style, which seems, after all, no trick, but natural enough to him; he has the art of saying simple things in a noble and dignified way without sacrificing simplicity. It is rare that his diction seems mannered or forced, and rarer still that it falls below the level of poetry, though so long a task must of course have its inequalities, and so large a body of blank-verse must needs have—what the Virgilian hexameter never has—its lapses into monotony. His blank-verse has often a Miltonic ring, and has it naturally, unlike Cowper's labored imitation of Milton's manner; and the effect is admirable, for after all it is Milton rather than Tennyson who is the most Virgilian of English poets. To do Mr. Williams justice it would be necessary to give specimens of his version at some length, and for that there is no space here; no brief citation can give any adequate idea of the high merit of his work as a whole. What space remains must be given to the ungrateful task of pointing out certain defects.

It is indeed unfortunate that a work of such excellence should be marred by faults which might easily have been avoided, and doubly unfortunate that some of these were not amended before the book was reprinted. There is time for only a few typical cases out of scores that might be cited. Mr. Williams is by no means entirely free from the very sins of which he accuses Dryden and Fairfax Taylor—mannerism and redundancy. Actual mistranslation, while not impossible to find, is rare, but frequent "padding" gives almost the same impression of lack of fidelity, and this offense is sometimes augmented by an unhappy mannerism. Many instances might be given of such liberties as the rendering of *se*, one little word, by "her own fair shape" (xi. 779) or "his great heart" (xii. 234). *Ab uno discet omnes!* How weak is the amplification, "Fling away thy glorious sword, mine offspring and mine heir," for that tremendous half-line (vi. 835) which so eloquently suggests the concentrated horror and indignation of the poet at the crime of civil war—*proice tela manu, sanguis meus!* Lapses from good taste and epic dignity, though few, are sometimes shocking enough: such unlucky expressions, for instance, as "makes off" (p. 407), "seafarers' kit" (p. 97), "warmed to its work" (p. 355), "cuddle into camp" (p. 293), "Make of me your swords' first work" (p. 313), "himself the sticking-point and tug of war" (p. 348), "Will not this shaft a good bit deeper drive?" (p. 350), "With our own eyes we picked out a good place to steal a march" (p. 302), "to carve the wound out with a sword, to rip the clinging weapon forth" (p. 435), "Trojan-born Aeneas having come, Dido, the lovely widow, looked his way" (p. 118), and the abominable word *drool* (p. 104). There is no space to point out metrical defects (I have noted, for example, seven octosyllabic lines and, as if to make up for these, as many Alexandrines) or slips in grammar, which are by no means few (on pp. 404 f. an eagle changes its gender!). On pp. 85 and 309 *ere* is misprinted for *er'e* (vice versa on p. 303), on p. 408 *sight* for *sighs*, on p. 99 *lives*, apparently, for *limbs* (*artus*), on p. 104 *Ithaca* for *Ithacus*, and on p. 428 *streaming steeds* probably for *steaming* (*fumantia*). There are also errors and inconsistencies of pronunciation, the worst of which is the accent of *Benacus* in the index of proper names as well as in the text (Mr. Williams is probably not responsible for the index, which contains other curious things): "Lake Benacus, the river's source and sire" (*quos patre Benaco velatus arundine glauca*, x. 205). How could the translator have forgotten the great line, *fluctibus et fremitu ad-*

surgens Benace marino, and the great passage in which it occurs? On p. 431 we have *Iapys* mispronounced with the accent on the antepenult, but on the very next page rightly pronounced with the penult long; here again the index is at fault. But for blemishes like these, this version might be pronounced without hesitation the most satisfactory—or must we rather say, least unsatisfactory—of all English renderings of Virgil's *Aeneid*.

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The Training of Teachers for Secondary Schools in Germany and the United States. By JOHN FRANKLIN BROWN. New York: Macmillan, 1911. Pp. x+335. \$1.25 net.

There is much reference to German practice in the discussion of American school affairs, so that any work which gives a clear, consecutive statement of what the older country is doing is an important addition to pedagogical literature. In this book there is added to this contribution an analysis of our own problem in training teachers, with suggestions of the next steps we may well take, and of the part the German plan may play in this reconstruction.

About two-thirds of the space is given to "The Training of German Teachers" and the remainder to "The Training of American Teachers." The former section begins with an account of Prussian schools and traces the development from 1810 to the present. We have nowhere else so adequate a statement of the various forms of the *Seminar* in connection with the university and in other relationships. There is an impartial showing of the state of opinion in Germany with reference to the study of education in the university and the *Seminarjahr* and the *Probejahr*.

The division relating to America is less satisfactory, in part no doubt owing to the less satisfactory condition of training in this country. There is an excellent statement of standards of certification and qualifications of secondary-school teachers in the various states. Then follows an account of what is being done in normal schools and colleges. The report of the Committee of Seventeen is given, and on the basis of what this proposes and the suggestions coming from the German system there is stated "a plan for providing for the desired training." This is summarized by the author (p. 278) as follows:

"1. A five-year course of combined academic and professional training following the completion of a good four-year preparatory course.

"2. Such study of two or three subjects as will give the candidate scholarship sufficient to teach them effectively in the high school.

"3. Such study of other subjects as will give him a broad outlook upon other departments of scholarship and upon life.

"4. At least an elementary study, during the third and fourth years of the college course, of the history of education, educational psychology, the principles of education, secondary education, and observation of actual teaching.

"5. One year of graduate study (which might well be called the professional year), in which he shall divide his time between actual teaching under careful supervision and additional theoretical professional study, the former to be regarded as fundamentally important.

"6. For the satisfactory completion of such a course of training the university should give a special professional teacher's certificate; and when the work is properly organized under state authority and supervision the state should give a professional life-certificate to teach in the high school."

In presenting material the writer gives many original documents and very serviceable summaries. There is a good index, a brief but fairly well selected bibliography, and an appendix containing "a brief account of the training of secondary-school teachers in Austria, Finland, Sweden, Denmark, Norway, France, England, and Scotland."

This work has needed doing, and the result of the author's undertaking is a book which will help any teacher to understand better the movement in the teaching profession.

Allgemeine Pädagogik. By THEOBALD ZIEGLER. Leipzig: Teubner, 1909. Pp. viii+148. \$0.30.

This is the third edition of one of the best brief statements in German of general educational problems. Professor Ziegler, of the philosophical faculty of the University of Strassburg, presents six addresses dealing with "The Aim and Motive of Education," "Physical Education," "Intellectual Training," "Training of the Feelings and the Will," "Who Shall Educate and Who Shall Be Educated," and "Schools and School Systems."

The number of pages is the same as in the earlier editions (1901 and 1904), but the amount of matter has been considerably increased. There is new material on education with reference to sex and the reform in schools for girls in Prussia. The author's attitude on simultaneous schools and the training of teachers of religion has brought him additional opponents, but he answers their objections by saying that he would be well satisfied were he so sure of everything else as he is that the *Simultanschule* would be a blessing to the German people, and that teachers of religion in schools have an urgent need of philosophical and historical training.

There is a good index.

Die deutsche Nationalschule. Beiträge zur Schulreform aus den deutschen Landserziehungsheimen. By HERMANN LIETZ. Leipzig: R. Voigtländer, 1911. Pp. 96.

Dr. Lietz is a most active worker and prolific writer. Besides articles in the encyclopedias and in periodicals, the announcement of publications having direct bearing upon the schools he has founded takes an entire page in the publisher's catalogue. His latest report (for 1909-10, the twelfth year) fills two hundred and eighteen pages. All of his experiences in this valuable experiment in the direction of a new type of school for German boys have been brought to a focus in the present work upon a German national school. There are tables giving in detail the daily programs, courses of study, etc., of the proposed school, and also comparisons in these matters with the existing secondary schools. At the close are given twenty articles in which the author sums up the demands of this new system. A third of these have to do with religious and moral education; the others are concerned with physical education, the reform of instruction, methods of instruction, and means of accomplishing school reform.

Any student of progressive education will find the statement by this vigorous reformer and experimenter of the present need in Germany a help in his own problems. It is characteristically German that the author turns to the Emperor as the means of accomplishing his end. A section is headed, "Der deutsche Kaiser, die Hoffnung aller Freunde der deutschen Nationalsschule." "Es bleibt ja immer noch ein Retter in der Not, der deutsche Kaiser Wilhelm II!"

The Seekers. By JESSIE E. SAMPTER. With an Introduction by JOSIAH ROYCE. New York: Mitchell Kennerley, 1910. Pp. xii+302. \$1.25.

Anyone not intimately acquainted with upper-middle-class young people in a large city may have some difficulty in getting from this book the very useful material it contains. It is characterized as a "successful experiment in non-sectarian religion, in moral and aesthetic inquiry, with young people in new ways, in search of the meaning of things." As Bergson has stated, "The idea of disorder arises in our mind whenever, seeking one of the two kinds of order, we find the other." Many readers will lay the book aside because they are so accustomed to other forms of religious interest and statement that this will seem "disorder."

Professor Royce has written an appreciative introduction in which he says: "The book is one to encourage every lover of good things, and everyone who wants to see how the minds of young people in this country, and living under good conditions, can be turned toward great questions in such a way as to encourage sincerity, thoughtfulness, and the beginnings of true wisdom."

Seven young people (five girls and two boys), all about sixteen years of age, met on seventeen Sunday afternoons during a winter and discussed a series of topics which the author had worked out, and which she has formulated in the appendix. The record made by the leader supplemented by papers written by the other members of the club or class furnishes an unusually straightforward account of a social experiment. A brief characterization of each of the "seekers" and the clearness with which they reveal themselves in the discussions add to the value of the report.

The author's philosophy is a form of idealism approved by Professor Royce, and while she does wish chiefly that the young people become seekers, she shows throughout considerable tendency toward propaganda in favor of her own views. It seems unfortunate, too, that in terminology there is a tendency toward absolutism beyond the author's probable intention—"complete," "perfect," "the true reason," and similar terms call for constant restatement on the part of some readers.

The idealistic fallacy here considers a painting art while a photograph must not be so accounted, because of the greater power in the former case of choosing and omitting details. This transcendental control is usually tempered by common sense, but (p. 229) in discussing vocations, teacher and pupils alike are carried off their feet by their hopes and feelings in the unrealistic manner so often resulting in disappointment.

It seems strange to say that "we would not discuss definite social or political problems at all, since the girls and boys had neither the experience nor the judgment to profit by them now," when their meetings were given up to such topics as "God and the Meaning of Progress," "Matter and Spirit," "Prayer," "Evolution,"

"Immortality," "The Meaning of Beauty," etc.: topics worth the while of the seekers, but surely as far removed from their experience as those which were so resolutely eliminated.

With all due account taken of limitations, this is one of the most adequate presentations we have of an experiment in an important field, and it deserves study by school and other social students and workers.

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English Literature: Its History and Its Significance for the Life of the English-Speaking World. A Text-Book for Schools. By WILLIAM J. LONG. Boston: Ginn & Co., 1909. Pp. xv+582.

A First Book in English Literature. By HENRY S. PANCOAST AND PERCY VAN DYKE SHELLY. New York: Henry Holt & Co., 1910. Pp. xix+497. \$1.15.

The man who sits him down to write a textbook of English literature is, in so far as he tries to do more than give a bare chronicle, hard put to it to reconcile a number of hardly reconcilable elements. If he is to succeed at all he must do more than give a bare chronicle; but criticism is just the thing that is likely to be fatal to him. Be critical, be critical; be not too critical, must be the legend over the entrance to his task. He is writing for readers for whom literature is, in a sense, on the defensive, readers who not only have as yet no critical judgment, but whose elementary liking for literature has hardly been won, and the spark of whose interest must be fanned into flame, yet with not too strong a breath.

A book of the type of Dr. Long's is likely, as a consequence, to prove of very genuine value in introductory courses. It is not too critical. In one sense it is not critical at all: it passes no independent judgment upon any writer or piece of writing, and clarifies no ideas, but falls easily into the current romantic estimate of literature, at times sinking to the weakling vacuity of art for art's sake, as in the introductory chapter: "A history or work of science may be, and sometimes is, literature, *but only as we forget the subject-matter and the presentation of facts in the simple beauty of its expression.*" The italics are mine. Dr. Long warns his reader that Johnson's criticisms are often misleading, and cites, as an example, the fact that Johnson had a word of praise for Pope. All this is intrinsically bad, but it may not be bad for those who are not yet strong enough for an adult diet. Elementary students are at a romantic age as well as in a romantic age, and can perhaps best be appealed to through the natural bent of their feelings. And withal it may be said that Dr. Long has a tender enthusiasm for literature that is genuinely infectious. His style is full of interest; he has the art of allusion and quotation, and a pleasing personal turn to his phrases.

To a mature mind the text by Messrs. Pancoast and Shelly is much more acceptable. Its criticisms are more objective, less marred by a romantic bias, far surer than those of Dr. Long. It may prove less enticing to a student who

has to be lured into a concern for literature, but it has the advantage of giving something better to those who may be more worth suiting—students whose environment and training have already given them a bent in that direction. Those who are familiar with Mr. Pancoast's *Introduction to English Literature* will find the present book shorter but based on the same general plan. There is less literary criticism in it and more biography, and the student, on the whole, is led to concentrate on a smaller number of writers of the first importance. The gain in this change is great.

SHERLOCK B. GASS

THE UNIVERSITY OF NEBRASKA

A Caesar Composition Book. By H. F. SCOTT AND CHARLES H. VAN TUYL.
Chicago: Scott, Foresman & Co., 1910. Pp. 120. \$0.30.

In these days of a crowded curriculum, shortened periods, and social activities in many forms, the problem of finding time for Latin prose is a difficult one. The present book goes very close to the heart of the matter by reducing the amount to the bare essentials and by presenting the principles simply and clearly. The writers have evidently discovered from their teaching experience that the second-year pupil is not so much in need of erudition as he is of the clear presentation of a few necessary facts.

The distinctive feature of the book is the elimination of the formal grammar as a textbook for the second year, the grammatical principles being stated at the head of each lesson with illustrative Latin sentences. However, the references to grammars in common use are given in fine print at the bottom of the page, for the convenience of those who believe that the student's introduction to the grammar should come in this way.

The lessons are twenty-nine in number, based on Books I and II of the *Gallic War*. The teacher who prefers to have the prose accompany the text throughout the year, or who chooses interesting campaigns from the seven books as a whole instead of reading the traditional four, will find himself handicapped by this arrangement.

Each lesson includes two new principles of syntax only. The sentences for composition are arranged in two paragraphs, the first containing six very simple illustrations of the points in question, and the second containing two or three more difficult ones. In general the lessons are such that a pupil may feel that mastery of them is possible. It is the opinion of the reviewer that much of the dislike of prose work comes from the feeling of incompetence in the face of an appalling mass of grammatical references to be mastered and sentences to be written.

The constructions chosen for treatment are probably those which most teachers would consider essential. The question of the different types of perfect stems on p. 53 is the only point which might well be omitted. The treatment of certain small but important questions, such as the uses of *et*, *que*, and *tique*, the possessive used as a substantive, the superlative with *quam*, the peculiarities of *alius . . . aliis*, and *mille* in the singular and plural, is very satisfactory, in that these are made prominent instead of being taken almost for granted in view of larger and more pressing questions.

The Appendix contains inflections reprinted from the *Bellum Helveticum*, several college-examination papers, and an English-Latin vocabulary, which would be more satisfactory if printed in larger type.

FRANCES E. SABIN

OAK PARK HIGH SCHOOL
OAK PARK, ILLINOIS

Fungous Diseases of Plants. By BENJAMIN MINGE DUGGAR. Boston: Ginn & Co., 1909. Pp. xii+508. \$2.00.

This work fills a gap which for a decade or more has been open in our plant literature. During the past thirty years a mass of data vitally related to economic plant-production has been gathered by the plant pathologists and physiologists of our state and federal experiment stations and kindred institutions. This information has received such a miscellaneous publication that only a few of the more favorably situated workers could keep in touch with the progress made. None more keenly felt the need of such a compilation as Dr. Duggar has given us than did the instructor in plant pathology and his students.

Plant pathology is a comparatively recent science. To the Europeans we must attribute the earlier investigations upon parasitism and the knowledge obtained of the epidemic nature of certain infections. With the advent of our state universities and experiment stations we have made much progress in phytopathology. Our greatest successes lie along the line of the control of fungous pests affecting field and orchard crops. Also much has been contributed upon heretofore unknown parasites, especially those of bacterial origin. Dr. Duggar, in his compilation, has in nowise overlooked these more recent advances.

The book gives, to quote the author, "a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants." The arrangement of the matter, from the standpoint of either a textbook or a reference work, is very good. The statements are concise and accurate. The author has used good judgment in the space allotted to each of the subjects treated. The essentials in the way of a bibliography heading each subject treated, together with a limited host index and a copious general index, will be of much value to the student.

The volume is attractive, well printed, and well illustrated. It is an excellent text for college courses in economic plant study, and will be of value also to teachers of nature-study and the more progressive of the laymen.

I trust that the book will receive such a ready acceptance that an early revision may be made, in order that the work may be kept up with the advances made in our knowledge of plant diseases. The volume might even now be enlarged to cover some fifty or more additional diseases. Further, I should like to see the host index extended to include all of the known parasites of the more familiar and economic plants, together with the essentials of a bibliography. If space demanded it, the host index and the bibliography might well be made in smaller type.

THOMAS F. MANNS

EXPERIMENT STATION
WOOSTER, OHIO

Manual of Agriculture for Secondary Schools: Studies in Soils and Crop Production. By D. O. BARTO. With an Introduction by E. DAVENPORT. Boston: D. C. Heath & Co., 1910. Pp. xiv+89. \$0.50.

There may be a difference of opinion as to whether agriculture should be regarded as a science, a combination of sciences, or something else; but one must marvel at the spread of this latest study of scientific character to knock for admission into the high-school curriculum. Where four years ago the number of high schools teaching agriculture was less than one hundred, it now runs into four figures. Of grammar-school texts we already have warnings of the flood to come. Few texts suitable for high-school classes, however, have appeared, and they have been of a general nature.

This little work is the first serious effort, outside of certain official publications, to furnish a complete set of field and laboratory exercises to guide the practical work of high-school classes in agriculture. Part I, on soils, includes twenty exercises, and Part II, on crops, has sixteen. The thirty-six exercises are intended to furnish material for an entire year's work, which they undoubtedly would do. Some are easily within the grasp of first-year pupils, but many others require a precision of manipulation, the lack of which has been the despair of so many teachers of the physical sciences in the third and fourth years. The author makes no suggestion as to the place in the high-school course the work is intended to occupy, other than to remark that it should precede another year's work on animal husbandry, pests, and kindred topics. The experiments do not follow in such close sequence as to preclude the order's being occasionally changed. While some of the exercises might be conducted by any teacher of fair scientific attainment, it would hardly be safe for one to attempt to carry a class through the entire set unless he had had the advantage of agricultural-college training. In other words, the work here undertaken is of a serious nature and not at all comparable with the tomato-can sort of demonstration work first used to popularize "school agriculture." Some of the apparatus called for will be found in the science equipment already possessed, but agricultural study calls for its own peculiar apparatus as truly as do the standard sciences. A fair-sized plot of ground is also necessary for the outdoor work.

Each exercise has a concise introductory statement, though to be intelligible the work should be accompanied or preceded by some physics and chemistry; if not by the regular high-school courses, then by supplementary work of the "elementary" or "introductory" variety of science. In only a few instances does the pupil have thrown at him without some preparation such terms as *osmosis* and *flocculation*. But the three-page discussion of the common elements and their compounds related to plant economy is hardly sufficient to give the mastery of their nature desirable in the investigation of plant foods and fertilizers. This is not a fault of the book but is incidental to the chaos still reigning in our ideas about the administration of agricultural education.

While considerable information is afforded by the discussions, the book makes no pretense of being a text, and abundant references are given at the close of each section. These are necessarily to the books used in the agricultural colleges. Indeed, the author's statement that many of the exercises are those

used in the colleges is an admission that much of the work of the agricultural colleges is still of secondary-school grade.

The author certainly deserves much credit for the performance of this pioneer work.

Tillers of the Ground. By MARION I. NEWBIGIN, London: Macmillan, 1910. Pp. vi.+224. \$0.50.

This is an interesting little work by a versatile British scientist, written in a simple style within the understanding of elementary-school children, and adapted for use to supplement work in geography, nature-study, and elementary agriculture. It deals not only with *tillers*, both savage and civilized, but with man's continual contest with nature, from his crudest efforts to the latest developments of science. The book is well fitted to furnish a "human interest" element to high-school botany where lack of time prevents reference to original sources.

Report of the Board of Education of Massachusetts on Agricultural Education. Boston: Wright & Potter Printing Co., 1911. Pp. 104.

State reports vary in nature. They may be descriptive, statistical, or made up of scattered reports, addresses, proceedings of educational meetings, and the like. Occasionally they embody results of extensive investigations, upon which are based recommendations of a constructive nature.

The report at hand is of the last sort. Pursuant to a resolution of the legislature, the investigation was undertaken by Commissioner of Education David S. Snedden, Deputy Commissioner Charles A. Prosser, and Special Agent Rufus W. Stimson. Hearings were held in many parts of the state and advice was sought from a large number of experts outside the state.

The report sets forth many facts about farming conditions in the state and the effects on values and output already resulting from improved methods. It considers the factors involved in the establishment of a system of secondary education in agriculture, such as minimum requirements in the way of locality, plant, equipment, support and control, admission and promotion, courses and methods of instruction, and the teaching staff. Social and economic factors also receive considerable attention.

Of most general interest, doubtless, are some of the recommendations. Schools with boarding departments are considered unnecessary for Massachusetts. Special schools in the more densely populated districts should be accessible to at least a hundred pupils by the ordinary means of transportation, while the needs of the more sparsely settled communities should be met by establishing special departments in existing high schools.

The work should consist of definite "projects"; that is, it should center about a series of well-organized problems. These are formulated for the entire four years, and represent the last and best pronouncement by the experts collaborating in the preparation of the report. A few of these projects are outlined in much detail to show the subsidiary propositions involved. They are so graded for the four years that they might well serve as a model for the organization of

high-school courses in agriculture in many places outside of Massachusetts, resting as they do upon very fundamental principles.

A striking recommendation is that an integral part of each project should be home work, carefully supervised, and credited toward school promotion. It is advised that at least one instructor be on duty during the growing season to carry on this phase of the school activities. The scheme is further elaborated into major and minor projects, with the appropriate divisions of the work into school and home work. Provision is also made for extending the part-time or continuation-school features as widely as practicable.

On the theoretical and administrative side of agricultural education of secondary-school grade this report is one of the most valuable contributions that have appeared. Written ostensibly for a particular state, and related in places to the local geography, it is so constructive in nature as to be suggestive to educational workers in all sections.

C. H. ROBISON

THE STATE NORMAL SCHOOL
MONTCLAIR, NEW JERSEY

Elements of Physics. By HENRY CREW. Revised by FRANKLIN T. JONES.
New York: Macmillan, 1909. Pp. xiv+435. \$1.10 net.

"The purpose of the study of physics is quite as much to furnish the student with a logical and easily remembered arrangement of his present knowledge as to put him in possession of new facts." This sentence, taken from the introduction, is the keynote of the book. The two distinctive features that give it character and weight as a high-school textbook are its logical connection of the parts of the subject and its elementary presentation of the facts. Physics is often regarded as a series of more or less disconnected and independent subjects. In this book the authors have succeeded in connecting the various topics so that their relation is apparent to the student.

The subject-matter is treated in ten chapters under the following heads: "Motion," "General Properties of Matter," "Special Properties of Matter," "Waves," "Sound," "Heat," "Magnetism," "Electrostatics," "Electric Currents," and "Light."

The treatment is elementary throughout. A topic is usually introduced with one or more illustrations drawn from phenomena with which the pupil is familiar. The explanation is clear and simple. A statement of the law follows the explanation; and where a mathematical statement is necessary the formula is developed through a process of explanation with a minimum of algebraic symbols. The topic closes with a brief summary. An ample number of problems is given to illustrate the subject, and they are not too difficult for the average pupil.

There is no sacrifice of scientific accuracy or completeness for the sake of elementary treatment. The book covers all the fundamental principles of the science and is fully up to the standard of college-entrance requirement in correctness and detail.

The following special features are worthy of mention as adding value to the book for class use. The historical development of the subject is brought out by frequent notes and references. At the ends of the chapters are placed lists

of references relating to the subjects treated. A synopsis of the metric system, various tables, and a list of useful numbers are given on the inside cover pages. The appendix contains a list of review questions. These questions have been selected from the examination papers of schools in all parts of the country, and will serve the double purpose of providing a convenient means of review and of comparing the ability of the pupil with the accepted standard of attainment for high-school pupils. As a means of assisting the pupil to apply principles and avoid an unintelligent use of the formulae in the solution of problems, a few analytical solutions have been placed in the appendix.

The Apprentices' Course of Experimental Physics and Mechanics. By JAMES L. MAXIM. London: Longmans, Green & Co., 1909. Pp. xiv+112. \$0.50.

This is a beginner's course in technical physics, entirely experimental and on a quantitative basis. It is designed to meet the requirements for the first and second-year preliminary technical examinations of the Lancashire and Cheshire Union of Institutes, the Oxford and Cambridge examinations in elementary science, and the requirements of the Board of Education for the Preliminary Certificate.

The course is divided into four sections: The first section, dealing with measurements, contains ten lessons. Section two considers, in ten lessons, the measurement of densities and the hydrostatic principles upon which their determination depends. Section three consists of eleven lessons on mechanics. The fourth section takes up heat in seven lessons. At the end of each section there is a set of questions for a written test paper and a set of exercises for a practical paper. At the end of the book there are a list of additional experiments, and several pages of examination questions. The Appendix contains a large number of useful tables.

The material of the book is condensed. The greatest accuracy and carefulness in the measurements are insisted upon. Numerous drawings, diagrams, and graphs are prescribed. The book contains a great many diagrams to illustrate apparatus and processes of measurement. The author has made no attempt to write interesting instructions or discussions, but he has compressed a great deal of useful information into a small volume, and the experiments are so clearly outlined that they will not lack interest to the earnest pupil.

The book contains no discussion of sound, light, or electricity, and hence is not adapted to the demands of the general course in American high schools; but for pupils preparing to enter a technical course in mechanics it will prove a most excellent book.

Physical Laboratory Manual for Secondary Schools. By CHARLES F. ADAMS. New York: American Book Co., 1909. Pp. 192. \$0.60.

The course is systematically arranged in seven chapters, with ten exercises on simple measurements, eight on mechanics of solids, twelve on the mechanics of fluids, eight on sound, twelve on light, nine on heat, and nineteen on magnetism and electricity. Practically every fundamental or important principle in physics is involved in one or more of the seventy-eight experiments.

Mr. Adams has put into the book not only his knowledge of the subject and

of the proper selection of material, but the fruit of his long experience in handling high-school pupils. This tells especially in the methods of presenting the work. While the book is essentially a course of quantitative experiments, it will not lack interest for the average pupil; for the simplicity of the apparatus and the explicitness of the instructions make the work of the experiments comparatively easy. The qualitative character is brought out in the full and clear discussions.

There are twenty tables of useful numbers, formulae, and physical constants in the Appendix.

DAVID A. WARD

THE MORGAN PARK ACADEMY
MORGAN PARK, ILLINOIS

History of Chemistry. Vol. I. From the Earliest Times to the Middle of the Nineteenth Century. By SIR EDWARD THORPE. New York: Putnam, 1909. Pp. xii+195. \$0.75.

This little volume contains a concise history of chemistry during the period named in the title. The separate chapters deal with the leading phases in the history of the science, such as the chemical philosophy of the ancients, alchemy, iatrochemistry, the atomic theory, the beginnings of electrochemistry, the foundations of organic chemistry, and the rise of physical chemistry. Within each chapter the treatment is largely biographical.

Many specific discoveries are mentioned, yet they are introduced with such skill that there is no feeling of overcrowding. The reader does not feel that he is wading through history, but rather that he is looking at a picture, and noting the details while keeping the whole continuously in view. The general perspective is preserved in a marvelous way, and the book constitutes by far the best brief history of chemistry in existence. Several admirable portraits, a bibliography, and an index are included.

ALEXANDER SMITH

COLUMBIA UNIVERSITY

BOOKS RECEIVED

EDUCATION AND PSYCHOLOGY

- A Cyclopedia of Education.* Edited by PAUL MONROE. Vol. II. New York: Macmillan, 1911. Pp. xi+726. Illustrated. \$5.00 net.
- Universities of the World.* By CHARLES FRANKLIN THWING. New York: Macmillan, 1911. Pp. xv+284. Illustrated. \$2.25 net.
- A Brief Course in the Teaching Process.* By GEORGE DRAYTON STRAYER. New York: Macmillan, 1911. Pp. xvi+315. \$1.25 net.
- The Learning Process.* By STEPHEN SHELDON COLVIN. New York: Macmillan, 1911. Pp. xxv+336. \$1.25 net.
- The Educational Views and Influence of De Witt Clinton.* By EDWARD A. FITZPATRICK. (Teachers College Contributions to Education, No. 44.) New York: Columbia University, 1911. Pp. xi+157. \$1.50.
- Mental Fatigue: A Comprehensive Exposition of the Nature of Mental Fatigue, of the Methods of Its Measurement and of Their Results, with Special Reference to the Problems of Instruction.* By MAX OFFNER. Translated from the German by GUY MONTROSE WHIPPLE. (Educational Psychology Monographs.) Baltimore: Warwick & York, 1911. Pp. viii+133.
- Psychology and Pedagogy of Writing: A Résumé of the Researches and Experiments Bearing on the History and Pedagogy of Writing.* By MARY E. THOMPSON. Baltimore: Warwick & York, 1911. Pp. 128.
- The Vocational Guidance of Youth.* By MEYER BLOOMFIELD. With an Introduction by PAUL H. HANUS. (Riverside Educational Monographs, edited by HENRY SUZZALLO.) Boston: Houghton Mifflin Co., 1911. Pp. xvi+124. \$0.60.
- Syllabus of a Course of Study on the History and Principles of Education.* By PAUL MONROE. New York: Macmillan, 1911. Pp. vi+87. \$0.25 net.
- United States Bureau of Education Bulletins, 1911. No. 7, Whole Number 453. *Undergraduate Work in Mathematics in Colleges of Liberal Arts and Universities.* (International Commission on the Teaching of Mathematics, The American Report, Committee No. X.) Pp. 30. No. 12, Whole Number 459. *Training of Teachers of Elementary and Secondary Mathematics.* (International Commission on the Teaching of Mathematics, The American Report, Committee No. V.) Pp. 23. No. 18, Whole Number 465. *Teachers' Certificates Issued under General State Laws and Regulations.* By HARLAN UPDEGRAFF. Pp. 269. Washington: Government Printing Office, 1911.

ENGLISH

- Democracy and Poetry.* By FRANCIS B. GUMMERE. Boston: Houghton Mifflin Co., 1911. Pp. viii+328. \$1.50 net.
- Mediaeval Story and the Beginnings of the Social Ideals of English-speaking People.* By WILLIAM WITHERLE LAWRENCE. (Columbia University Lectures.) New York: The Columbia University Press, 1911. Pp. xiv+236. \$1.50 net.
- Early English Poems.* Selected and edited by HENRY S. PANCOAST and JOHN DUNCAN SPAETH. New York: Henry Holt & Co., 1911. Pp. xviii+548. \$1.50.

Readings in English Prose of the Eighteenth Century. Edited by RAYMOND MACDONALD ALDEN. Boston: Houghton Mifflin Co., 1911. Pp. xiv+725. \$2.25.

English Readings for Schools. General editor, WILBUR LUCIUS CROSS. *Macaulay's Essays on Clive and Hastings.* Edited by FREDERICK E. PIERCE and SAMUEL THURBER, JR. Pp. xxviii+293. *Scott's Ivanhoe.* Edited by ALFRED A. MAY. Pp. xxvii+579. *Stevenson's Inland Voyage and Travels with a Donkey.* Edited by EDWIN MIMS. Pp. xxx+293. Illustrated. New York: Henry Holt & Co., 1911.

The Personal History and Experience of David Copperfield the Younger. By CHARLES DICKENS. Edited with Introduction and Notes by EDWIN FAIRLEY. (Macmillan's Pocket Classics.) New York: Macmillan, 1911. Two vols. Pp. xxxiv+525, 533. With a portrait. \$0.50 net.

Washington's Farewell Address and Webster's First and Second Bunker Hill Orations. Edited with an Introduction and Notes by FRED A. SMART. (Merrill's English Texts.) New York: Charles E. Merrill Co., 1911. Pp. 130. With a portrait. \$0.25.

GREEK AND LATIN

The Essentials of Greek Syntax: An Outline of the Ordinary Prose Constructions, together with Exercises in Composition Based on Xenophon, Lysias, and Plato's Apology. By CHARLES CHRISTOPHER MIEROW. Boston: Ginn & Co., 1911. Pp. viii+165. \$1.25.

A History of Classical Philology from the Seventh Century B.C. to the Twentieth Century A.D. By HARRY THURSTON PECK. New York: Macmillan, 1911. Pp. xii+491. \$2.00 net.

FRENCH AND GERMAN

Dictionary of French and English, English and French. Compiled by JOHN BELLOWS. Revised and enlarged by WILLIAM BELLOWS, with the assistance of AUGUSTE MARROT and GUSTAVE FRITEAU. New York: Henry Holt & Co., 1911. Pp. 700. \$1.50.

Neuf contes choisis de Daudet. Edited for School Use, with Biography, Notes, Composition Exercises, and Vocabulary, by VICTOR E. FRANCOIS. New York: Henry Holt & Co., 1911. Pp. xi+205. With a portrait. \$0.35.

L'Avare. Comédie par MOLIERE. Edited by O. H. FYNES-CLINTON. (Siepmann's Classical French Texts. General Editors, OTTO SIEPMANN and EUGENE PELLISIER.) New York: Macmillan, 1911. Pp. xviii+213. \$0.35 net.

Siepmann's Advanced French Texts. General Editors, OTTO SIEPMANN and EUGENE PELLISIER. *Mon oncle et mon curé.* Par JEAN DE LA BRETE. (Ouvrage couronné par l'Académie française.) Adapted and edited by E. C. GOLDBERG. Pp. x+195. *Tartarin de Tarascon.* Par ALPHONSE DAUDET. Adapted and edited by OTTO SIEPMANN. Pp. xii+211. *Le roi des montagnes.* Par EDMOND ABOUT. Adapted and edited by ERNEST WEEKLY. Pp. xi+230. New York: Macmillan, 1911. Each, \$0.35.

L'attaque du moulin. Par E. ZOLA. Edited with Notes, Exercises, and Vocabularies, by T. H. BERTENSHAW. (Longman's French Texts, Intermediate Series.) Reissue. London: Longmans, Green & Co., 1911. Pp. ii+94. \$0.25.

Grete Minde: Nach einer altmärkischen Chronik. Von THEODOR FONTANE. Edited with Introduction and Notes by HARVEY W. THAYER. New York: Henry Holt & Co., 1911. Pp. xxxi+184. With a portrait. \$0.60.

HISTORY AND CIVICS

Historical Research: An Outline of Theory and Practice. By JOHN MARTIN VINCENT. New York: Henry Holt & Co., 1911. Pp. v+350. \$2.00.

A History of the Ancient World. By GEORGE WILLIS BOTSFORD. New York: Macmillan, 1911. Pp. xx+588. With maps and numerous illustrations. \$1.50 net.

An American History. By DAVID SAVILLE MUZZEY. Boston: Ginn & Co., 1911. Pp. x+662. Illustrated. \$1.50.

Readings in American History. With Biographies and Explanatory Notes by EDGAR W. AMES. Book I: SMITH'S *True Relation*, JUET'S *Discovery of the Hudson*, BRADFORD'S *Plymouth Plantation*, HUTCHINSON'S *Destruction of the Tea*. Pp. 167. Book II: *The Monroe Doctrine*, LINCOLN'S *Inaugural*, *Emancipation Proclamation*, and *Gettysburg Speech*, SEWARD'S *Speech on Alaska*, *Autobiography* of PETER COOPER. Pp. 134. With portrait. New York: Charles E. Merrill Co., 1911. Each, \$0.25. *Questions in Municipal Civics.* By ALBERT A. GIESECKE. (Cornell Study Bulletins for Teachers, edited by CHARLES DE GARMO, No. 5.) Syracuse, N.Y.: C. W. Bardeen, 1911. Pp. 114.

SCIENCE

Five Hundred Regents' Questions in Biology and Zoölogy. Selected from Post Examinations with more than 2,500 References to Leading Textbooks for Answers, by S. C. KIMM. Syracuse, N.Y.: C. W. Bardeen, 1911. Pp. 41.

Upon the Inheritance of Acquired Characters: A Hypothesis of Heredity, Development, and Assimilation. By EUGENIO RIGNANO. Authorized English Translation by BASIL C. H. HARVEY. With an Appendix upon the Mnemonic Origin and Nature of the Affective or Natural Tendencies. Chicago: The Open Court Publishing Co., 1911. Pp. iv+413. \$2.00.

Practical Botany. By JOSEPH Y. BERGEN and OTIS W. CALDWELL. Boston: Ginn & Co., 1911. Pp. vii+545. Illustrated.

Applied Biology: An Elementary Textbook and Laboratory Guide. By MAURICE A. BIGELOW and ANNA N. BIGELOW. New York: Macmillan, 1911. Pp. xi+583. \$1.40 net.

Laboratory Exercises in Elementary Science for the Younger Pupils in Secondary Schools. By W. E. HOWARD, Ottawa, Ill.: Fair Dealer Print., 1911. Pp. 103.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS¹

IRENE WARREN

Librarian, School of Education, The University of Chicago

- ABBOTT, CHRISTABEL. Dramatic training in the normal schools of New York state. *Educa.* 32:99-104. (O. '11.)
- ARCHIBALD, GEORGE HAMILTON. The aim of religious education. *Child* 2:35-39. (O. '11.)
- ARMSTRONG, EDWARD C. The place of modern languages in American education. *School R.* 19:596-609. (N. '11.)
- BENNETT, CHARLES A. The place of manual arts in education. *Educa.* R. 42:245-53. (O. '11.)
- BENTLIFF, WALTER D. The place of examinations in the primary school. *School W.* 13:369-70. (O. '11.)
- BOBBITT, JOHN FRANKLIN. A city school as a community, art, and musical center. *El. School T.* 12:119-26. (N. '11.)
- BOGGS, ANITA U. A plea for the forward child. *Child* 2:45-47. (O. '11.)
- BOURNE, RANDOLPH S. The college: an undergraduate view. *Atlan.* 108: 667-74. (N. '11.)
- BREDVOLD, LOUIS I. The high-school course in American government. *Educa.* 32:93-95. (O. '11.)
- BRICKER, G. A. A suggestive outline for a one-year course in secondary agriculture for rural and village high schools. *Educa.* 32:75-76. (O. '11.)
- BURGESS, THEODORE C. Athletic relations of Illinois colleges. *School R.* 19:513-22. (O. '11.)
- BURSTALL, SARA A. The place of examinations in education. *School W.* 13:367-69. (O. '11.)
- BUTTENWIESER, ELLEN CLUNE. The obstinate child. *Pedagog. Sem.* 18: 315-28. (S. '11.)
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¹ Abbreviations.—Amer. Phys. Educa. Rev., American Physical Education Review; Atlan., Atlantic; Educa., Education; Educa. R., Educational Review; El. School T., Elementary School Teacher; Journ. of Educa. (Bost.), Journal of Education (Boston); Journ. of Educa. Psychol., Journal of Educational Psychology; Kind. M., Kindergarten Magazine; Lit. D., Literary Digest; Liv. Age, Living Age; Out., Outlook; Pedagog. Sem., Pedagogical Seminary; Pop. Educator, Popular Educator; Pop. Sci. Mo., Popular Science Monthly; Psychol. Clinic, Psychological Clinic; R. of Rs., Review of Reviews; School R., School Review; School W., School World; Sci. Amer., Scientific American; Teach. Coll. Rec., Teacher's College Record; Voca. Educa., Vocational Education.

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